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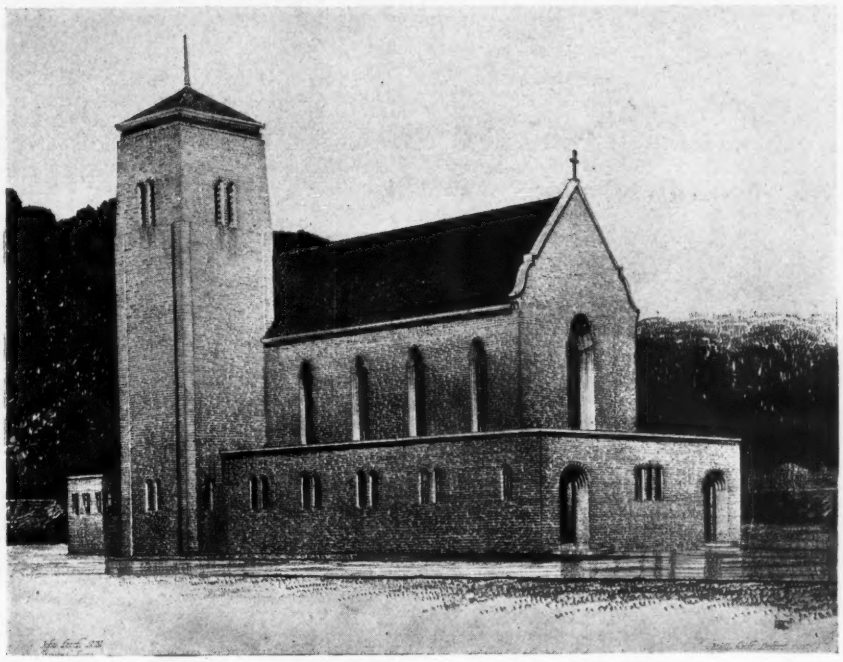


R.A. EXHIBITION, 1934.

A CHURCH IN ESSEX.

MR. JOHN LEECH, L.R.I.B.A., Architect.

MEETINGS

FRIDAY, *May* 18.

Institution of Structural Engineers (*Western Counties Branch*). Mr. A. J. Bowron on "Evolution and Economics of Structures." At the Merchant Venturers' Technical College, Bristol. 7.15 p.m.

THURSDAY, *May* 24.

Institution of Structural Engineers. Annual General Meeting. 10, Upper Belgrave-street, S.W.1. 6.30 p.m.

FRIDAY, *May* 25.

Town Planning Institute. Mr. H. V. Lanchester on "Height and Bulk of Buildings in Relation to their Requirements and Surroundings." At Caxton Hall, S.W.1. 6 p.m.

Institution of Municipal and County Engineers. South-Eastern District Meeting. At the Town Hall, Tunbridge Wells. 11.45 a.m.

MONDAY, *May* 28.

Royal Institute of British Architects. Mr. Percy Thomas on "Planning of Municipal Buildings." 8 p.m.

TUESDAY, *May* 29.

Architectural Association. Mr. W. M. Dudok on "Buildings at Hilversum." 8 p.m.

London Society. Visit to the "Swakeleys," Ickenham, Middlesex. 2 p.m.

TUESDAY-SATURDAY, *May* 29-*June* 9.

Architectural Association. Exhibition of the work of Mr. W. M. Dudok. 10 a.m.-10 p.m.

THURSDAY, *May* 31.

Architecture Club. The 23rd Dinner. Discussion on Slum Clearance. At the Savoy Hotel, W.C.2. 7.45 p.m.

FRIDAY, *June* 1.

Institution of Sanitary Engineers. Visit to Battersea Power Station, 2.30 p.m.; and General Meeting, at the Hotel Belgravia, Grosvenor-gardens, S.W.1. 6 p.m.

Institution of Municipal and County Engineers. Meeting of the West Midland District. At Droitwich. 3 p.m.

SATURDAY, *June* 2.

Institution of Municipal and County Engineers. Southern District Meeting. At the Town Hall, Reading. 11 a.m.

Institution of Sanitary Engineers. Visit to the South Essex Water Works, Colchester. 12.30 p.m.

WEDNESDAY, *June* 6.

London Society. Annual Dinner. At the Hotel Victoria, Northumberland-avenue, W.C.2. 7.45 p.m.

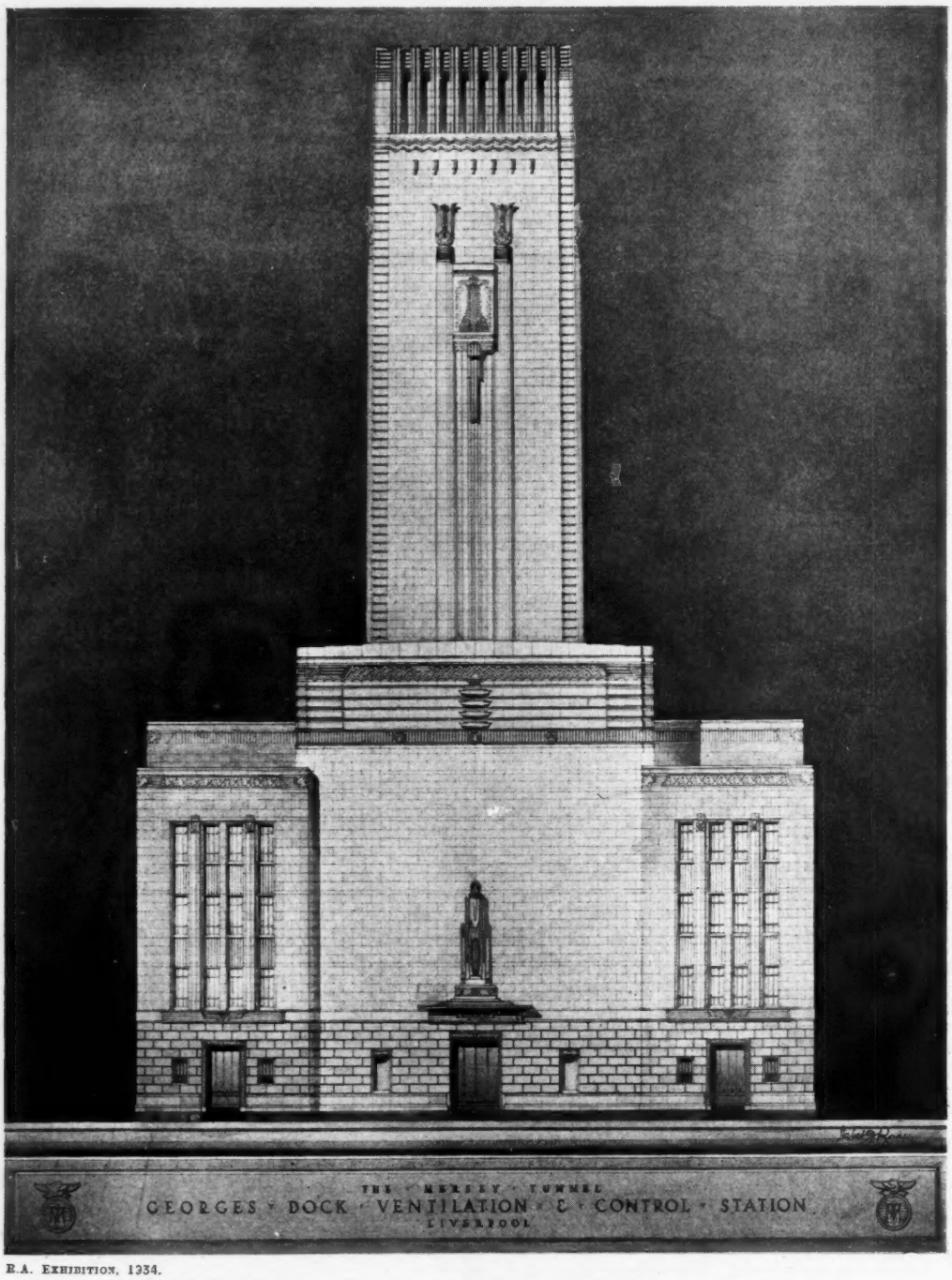
National Housing and Town Planning Council. Regional Conference of Local Authorities. At the County Hall, S.E.1.

WEDNESDAY-FRIDAY, *June* 6-8.

Institution of Structural Engineers. Summer Conference. At Bath.

SATURDAY, *June* 9.

St. Paul's Ecclesiological Society. Visit to Abbey Church of the Holy Cross, Waltham.



R.A. Exhibition, 1934.

THE MERSEY TUNNEL, LIVERPOOL: George's Dock Ventilation and Control Station.

MR. HERBERT J. ROWSE, F.R.I.B.A., Architect.

STEEL STRUCTURES RESEARCH

THE Second Report of the Steel Structures Research Committee, particulars of which we publish this week, serves principally to show how little has been generally known and understood about the stresses produced in steel-framed structures. Any who doubted the usefulness of calling together this committee, composed of men of wide experience and high technical qualifications, should on studying this Report be disillusioned, although some parts may prove rather elusive for those with no mathematical knowledge.

The Committee have directed the research at Watford, Teddington and the various Universities along those lines which are most likely to be of use to the industry, and during the period under review they have undertaken that research which no private concern could be expected to tackle; but at the same time it is work of the utmost importance, and upon which little information has been available in this country. This refers particularly to the investigation of the stresses in building frames, in which many series of experiments are necessary before any reliable deductions can be made.

Anyone who may have expected from the Committee definite rules in this Report for the design of steel-framed structures, or anyone who may have looked for further recommendations modifying or improving upon the Code of Practice published in the first report, will be disappointed. It is clear that a great deal of work still has to be done before such rules and recommendations are possible. This must not be taken as a suggestion on our part that the present Report is inadequate; on the contrary, it shows quite clearly the magnitude of the problems involved and the importance of caution in giving general rules for design. It is therefore desirable that the work should be pursued with the greatest possible speed.

As already indicated, the Report does not give the general conclusions of the Committee. It is rather a series of reports of the investigators to whom various problems have been delegated for experimental and theoretical research. The first of these, dealing with the effective length of pillars, indicates that where the beams are stiff as compared with the columns, the figures in the Code of Practice, published in the first report and substantially adopted by the L.C.C. and the British Standards Institution, are on the safe side. It is uncertain whether any appreciable economy can be effected in the design of steel columns, and a statement on this point will be awaited with interest, but it must be borne in mind that, whilst special cases justify elaborate calculations, any general rules should be applied in the drawing without incurring expenses which outweigh the saving in material.

The second report gives the results of some very interesting tests at the new Museum of Practical Geology building at South Kensington, where the stresses in beams and columns were observed for various conditions of loading both before and after the steelwork was encased in concrete. The section following is upon the investigation of beam and stanchion connections, whilst the fourth deals with the use of black bolts under controlled torque, *i.e.*, in tightening up the bolts. The next three describe the results obtained from the investigation of the moments and stresses in frames, and also methods of calculating moments and of analysing the stresses, but these are only suitable for use in special cases.

All those who are interested in the design of steel-framed buildings should find the descriptions of the test and the apparatus devised for their execution particularly interesting, whilst from the results one can begin to form an idea of the way in which such structures behave under various conditions of loading. One conclusion which may reasonably be drawn is that the connections between beams and columns such as have been in general use for many years do, in fact, exercise considerably more restraint than has been generally assumed. This restraint is only produced by high stresses in the angles and bolts or rivets forming the connection, and it appears probable that the excellent quality which steel possesses of considerable elongation immediately after the yield point has been reached without increase of tension provides the explanation why failure has not taken place, particularly in top cleats. This fixity in turn produces larger stresses in columns than ordinarily allowed for, particularly in outside columns, but these stresses only occur at the floor levels where the columns are tied, and therefore at points where they are prevented from buckling.

The various reports should be considered in relation to other methods of design, in which a frame is regarded as a series of beams and columns with "free" joints; but at the same time they provide sufficient information to prevent any alarm for the safety of structures so designed. The question which many will ask is this: Can the Committee devise a method of design which will consider a steel-frame building as it really is, namely, a semi-rigid structure which can be carried out easily and quickly and not prove extremely expensive? For this reason the future reports will be anxiously awaited. In the meantime, we have at our disposal the results of their investigations up to the present time and must try to use them to the best advantage; but the First Report, which now forms the basis of most of the regulations governing steel-frame buildings, will continue to control design until the Committee can see their way to make further concrete recommendations. It is for this reason that the present Report is rather more of interest than of practical use to the average member of the industry. Indeed, we feel that it must be taken as reporting progress, and as such it gives adequate proof that the Committee are doing an immense amount of work on very useful lines.

So far no reference has been made to that portion of the Report dealing with welding of structural steelwork. In presenting the Report, the Chairman states that the investigations in this direction have not proceeded as rapidly as might be desired. This is a great pity, for although the British Standards Institution has issued Specification No. 538 dealing with the arc welding of steel structures, nevertheless some definite suggestions from the Steel Structures Research Committee would be extremely useful to those who wish to see provisions for welding incorporated in their building regulations.

The Report outlines the programme which is being undertaken in order to determine the reliability of electric arc welding by testing the work of a large number of welders employed by various firms. The work described is merely preliminary investigations to decide the nature of test to be applied to the welds submitted by the various firms and to determine the properties of the various types of electrode. There is also a progress report upon the fatigue tensile experiments on weld metal and welded joints, which suggest that the fatigue strength of welded joints is considerably below that of mild steel plates.

The Second Report of the Steel Structures Research Committee covers the period from March, 1931, to March, 1933, and it is hoped that, since the latter date, now over a year ago, considerable further progress has been made, which will lead at an early date to another and more definite report, particularly upon the design of frames such as occur in steel-frame buildings and upon the reliability and design of weld joints. Another publication without some more definite recommendations would be a little disappointing.

NOTES

The Gropius Exhibition.

THIS interesting exhibition at the R.I.B.A., embraces buildings of a varied character, and includes designs for town planning schemes, a competition design for a town hall at Halle made in 1927, large blocks of flats, factories and some domestic work. To the modern school the exhibition will no doubt make a strong appeal, but it may not be so well appreciated by the older school of architects. Perhaps there is yet another school, represented by those artists and others who are frankly bewildered by what they see and hear proclaimed as art and who fear to express their opinions—it may be, because of uncertainty of understanding. The sweeping away of unnecessary ornament which, as often applied, was a form of vulgar ostentation, is an improvement. A number of English and foreign architects are doing good work on these lines, but they have been followed by many copyists, who wish to be in the fashion, but who do not always succeed, and whose works appear to have a "mass production character." In reference to some of the designs at the R.I.B.A., we believe many architects will ask whether these works are the designs of skilled engineers or of architects, and where the "art" is to be found in the design? The work of the engineer and steel constructor is much more in evidence than that of the architect. We have heard it described as "Meccano architecture."

"Wren's Row."

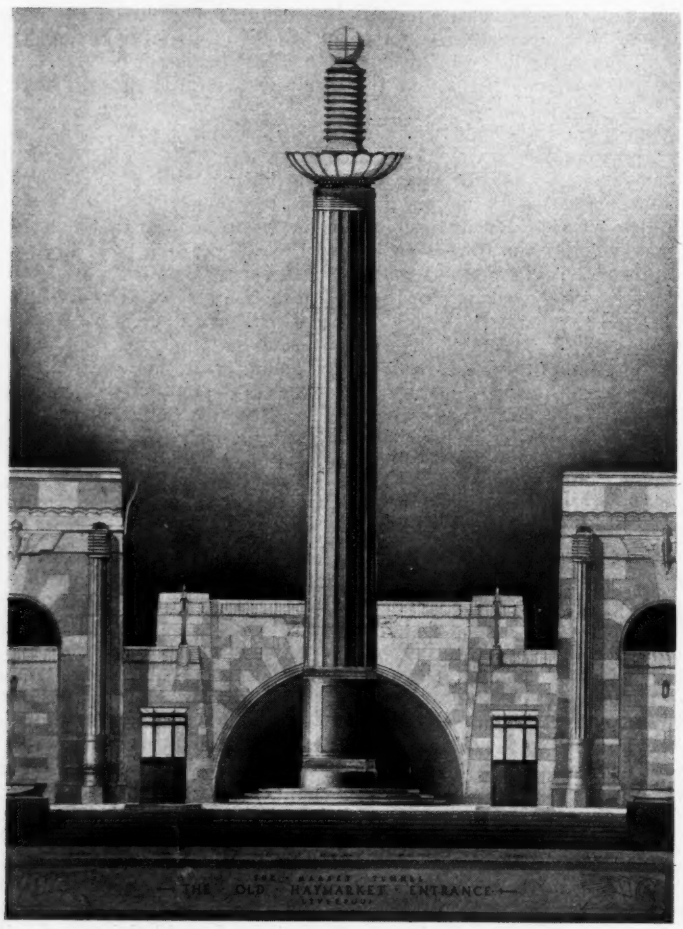
WE are very glad to call attention to a letter, reproduced in our correspondence columns, under distinguished signatures in support of the preservation of the fine row of old houses of the Wren period, facing Clapham Common, which local tradition has it were designed by Sir Christopher Wren himself. Such characteristic landmarks are becoming rare, so that much is to be said for retaining these old links with the past, that have so much history in them and which are so characteristic of the fine domestic architecture and craftsmanship of the period. We therefore hope the effort to secure them will be successful. The object is so desirable that it should appeal to many who would like to combine a good work with the return of a reasonable dividend on the amount subscribed. The scheme also includes the erection of twelve small, two-story houses of architectural distinction between the open space of Clapham Common and the large garden of the old Rectory. To retain what we can of the traditional past amongst the new, to combine in our amenities this sort of union instead of losing it altogether, is wiser than ruthless destruction, of which there has been far too much, and Clapham would be the richer for this improvement, combining old associations with present usefulness.

Waterloo Bridge.

WE are glad to note from a report of *The Times* Parliamentary correspondent that Sir Harley Dalrymple-Hay, who is specially qualified to speak on the subject, addressed a meeting on Monday of Members of Parliament who have taken a special interest in the preservation of Waterloo Bridge. He declared that the "construction of a new bridge, such as the Labour Party on the London County Council now proposed, would mean a dislocation of traffic in the heart of London for seven years, whereas the present bridge could be remodelled in about two years, and only during a few months of that time would it be necessary to close the bridge to traffic altogether. If money was now available for a new bridge it could be spent to much greater effect at Charing Cross. On the other hand, the construction of a new bridge at Waterloo would delay the Charing Cross scheme indefinitely." Although these criticisms are not new, it is well to have them repeated by an engineer of the experience and eminence of Sir H. Dalrymple-Hay. We hope that Parliament will not agree to the L.C.C. proposals and that that body will proceed with the reconditioning plans of the previous Council.

Canada's Building Industry.

A CORRESPONDENT writes: "That activity in the construction industry — the production of capital goods, such as buildings of all sorts, and new machinery—is of major importance to national welfare, needs no emphasis in these pages. But it is interesting to note that the Royal Bank of Canada, in its Monthly Letter for May, cites the truism in lamenting the Dominion's slowness of recovery in the building trades. Industry in general during the past year has made spectacular advances, but the production of capital goods has lagged. Building permits to March last show, it is true, a hundred per cent. increase on the previous year, but the figures are small and are mainly significant as reversing the trend of recent years. How adverse that trend was is indicated by contracts actually awarded during the first quarter of the following six years :—



R.A. EXHIBITION, 1934.
THE MERSEY TUNNEL, LIVERPOOL: The Old Haymarket entrance.
MR. HERBERT J. ROWSE, F.R.I.B.A., Architect.

MEDIAEVAL HOUSES, NUREMBURG.

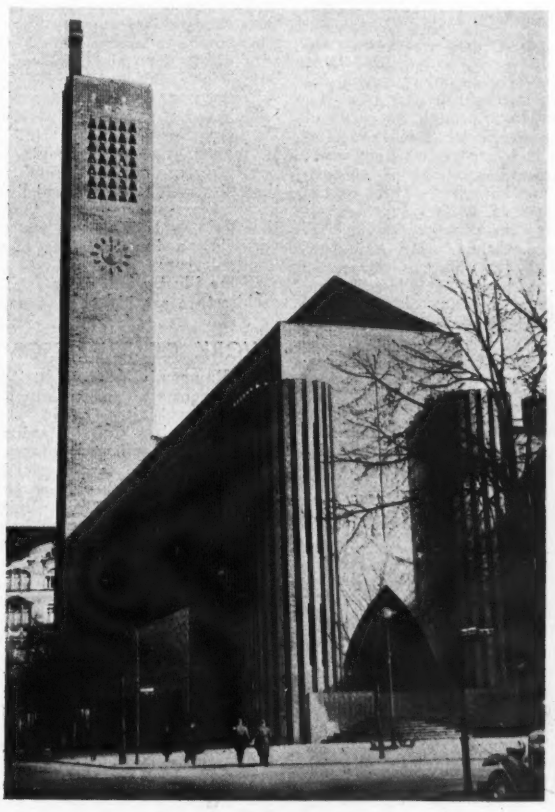
"1929	...	...	$98,000,000
1930	...	...	90,000,000
1931	...	...	74,000,000
1932	...	...	38,000,000
1933	...	...	10,000,000
1934	...	...	20,000,000."

Prospect of Improvement.

In the Monthly Letter we read :—"A large proportion of the improvement this year is due to engineering projects undertaken in relief of unemployment. There has been no large increase in private construction. On a percentage basis, however, there has been sufficient improvement to be worthy of attention. Business construction in the first three months of 1934 amounted to $3,900,000, compared with $3,071,000 last year, and residential construction increased from $2,924,200 to $3,596,000. There has been a slight falling off in industrial construction; engineering projects, largely Government works, increased by about eight million dollars. Construction costs have ceased to decline and there is some prospect that they may begin to increase. Building materials now cost about three-fourths as much as in 1929, and wages are also substantially lower. The lack of building in the past few years has created a potential shortage of considerable magnitude which will only be generally appreciated when rents and building costs begin to advance. It will not be long, however, before those industries which have benefited by improved conditions will take advantage of low building costs to alter, repair and to construct for their current and prospective requirements."

Ireland's Beauty.

The note of vision and idealism in the Budget Speech of the Irish Free State Minister of Finance is indicated in the following, which is not what we are accustomed to in Budget speeches which, as a rule, are notoriously dry and material. "Our sea shores, with their fine beaches, are too frequently disfigured by atrocious tin shacks, and litter and rubbish of all kinds, where a little care and planned attention might make them places of wonderful delight. Our mountain roads are often impassable for vehicle or wayfarer. Along the countryside we have weeds where in many places we might almost as easily have flowers. Our towns are without design and almost without ornament; they have few agreeable buildings, few public gardens, few spacious streets or delightful squares, few of the amenities which elsewhere lend so much grace and charm to life. Though their social value is unquestionably great, it is not possible to assess the material return which accrues from such possessions. Possibly it is for this reason that our local authorities seem to be slow to undertake the provision of them, even though that would be one of the most agreeable ways of giving employment." It is gratifying to read the above pronouncement by the Minister. Ireland's beauties can hardly be rivalled, ranging as they do from the sternness of Aran to the sophistication of Georgian Dublin, and we look forward with interest to the final passing of the Free State Town and Regional Planning Bill, which should help in the battle against ignorance and vandalism.



A MODERN CHURCH, HOHENZOLLERN SQUARE, BERLIN.

See page 840)

GENERAL NEWS

The Architecture Club: Change of Address.

The office of the Architecture Club has been removed to Craig's Court House, 25, Whitehall, London, S.W.1. Telephone: Whitehall 2742.

An Appointment.

Mr. Arthur Bloomfield Jackson, F.R.I.B.A., of 3, New-square, Lincoln's Inn, W.C.2, has been appointed Surveyor to the Southwark Diocesan Dilapidations Board in place of the late Mr. John Rawlinson.

Proposed Cathedral, Blackburn.

The Diocese of Blackburn has plans under consideration for the enlargement of the Parish Church to form a cathedral. It is proposed to use the present building as the nave of the cathedral and to build out at the east end a choir, chancel, side chapels and vestry accommodation. The cost is estimated at £200,000, and the architect is Mr. W. A. Forsyth, F.R.I.B.A., 12, Stratford-place, W.1.

Exhibition of Architects' Working Drawings.

On Wednesday, May 9, a students' evening was held in connection with the R.I.B.A. Exhibition of Architects' Working Drawings. There was an excellent attendance of students, and they spent a considerable time inspecting the exhibition, which included drawings lent by Sir Giles Gilbert Scott, R.A., P.R.I.B.A., and Messrs. T. A. Darcy Braddell, F.R.I.B.A., P. D. Hepworth, F.R.I.B.A., C. H. James, F.R.I.B.A., Edward Maufe, M.A., F.R.I.B.A., and G. G. Wornum, F.R.I.B.A. Mr. C. H. James, Mr. Edward Maufe, Mr. R. A. P. Pinckney (representing Sir Giles Gilbert Scott), Mr. H. C. Upton (representing Mr. T. A. Darcy Braddell), and Mr. J. L. Young (representing Mr. G. G. Wornum) attended and explained to the students the special points of interest in their respective drawings.

The Late John Saunders, L.R.I.B.A.

We have to record the death, at Newark-on-Trent, of Mr. John Saunders, L.R.I.B.A. Born in Newark, Mr. Saunders began his career as an architect under the late Mr. George Sheppard, the Borough Surveyor of Newark, and, after gaining further professional experience in Newport and Chichester, he returned to Newark to commence the business of Saunders and Saunders. Then, on the death of Capt. Lockton, a few years ago, he bought and became the principal of the firm of Sheppard and Lockton. Mr. Saunders' buildings included the Magnus Grammar School, Newark, vicarages at Newark and Halam, and a great number of residences, public and industrial buildings in the district. He was a member of the first committee of the Newark Civic Association.

Appointments Vacant.

Manchester Housing Committee invite applications for the post of permanent architectural assistant, at a commencing salary of £305 per annum. Application forms can be obtained from the office of the Housing Director, Town Hall, and must be returned by June 4.

An assistant is required in the inquiry bureau of the Building Research Station, Watford. Initial salary, £250-£350. Applications (on special form) from Secretary, Department of Scientific and Industrial Research, 16, Old Queen-street, S.W.1.

A temporary architectural assistant is required in the Borough Engineer's Department of the Huddersfield Corporation. The salary is £350. Applications (on forms obtainable from Mr. W. Jaggar, Borough Engineer and Surveyor) must be returned by May 31.

Kesteven County Council invite applications for the position of a temporary architectural assistant for a minimum period of six months, at £6 6s. per week. Applications must be made by May 31 to Mr. W. T. Phipps, Clerk, County Offices, Sleaford, Lincs.

GERMAN ARCHITECTURE

By BRUNO FALCONER.

THE whole splendour of ancient times has been preserved all over Germany, not in dead museums, but in the living surroundings of everyday; from the Marienburg, the walled fortress of militant knights in East Prussia, to Bamberg and Naumburg in the south, with their rows of glorious saints; from the carved wood treasures of Nuremberg and Rothenburg to the richness of Cologne.

There is an added interest to the ecclesiastical architecture of Germany in the new churches that have been built which are modern in feeling and yet have lost nothing of their reverent sacerdotal character. Three new churches in various Berlin suburbs all followed the red brick architecture and carving peculiar to northern German cities, but were conceived in most modern, almost futurist style. One has a large cross in porcelain on the altar and the wall behind painted in changing colours; another, symbolic figures of the virtues outside, which might have been designed by Epstein.

Turning to secular architecture, we find such examples as that imposing giant of beautiful proportions, the Chile House in Hamburg, which is a block of offices. In Berlin, Poelzig's interesting experiment, the Grosses Schauspielhaus, converted from a circus into the Theatre of the Five Thousand —and the Volks Bühne, built by working men with their own savings just before the war, a dignified and beautiful specimen of the older modernism, with its interior of palisander wood. All that was best in the abused Jugendstil, which at least had the merit of breaking away for the new, may be studied in Darmstadt, where the artist's colony and the marriage tower repay inspection.

The pearl of cities, architecturally speaking, is Dresden, where it is hard to say whether the magnificently balanced Zwinger courtyard with its pure baroque richness is more to be admired or the terraced sweep along the Elbe, so carefully preserving the native richness of the river panorama. Houses in Germany are usually flats; fine examples of these may be seen in almost every city. The new ones are almost always architecturally admirable; the older ones seldom anything but awful examples.

Railway stations are often interesting—in Leipzig, in Cologne, in Augsburg. In Hanover, see the Town Hall (present), in Wurzburg, the Archbishop's palace (past). See Dürer's house in Nuremberg and realise that they could build a good living house five hundred years ago—or go to Miltenberg on the Main and drink a glass of good Main wine in an inn that has stood for seven hundred years.

(Some illustrations of old and new German architecture are given on page 839.)

WORK OF PROFESSOR GROPIUS.

Sir Raymond Unwin, Past-President of the R.I.B.A., opened an exhibition of the works of Professor Walter Gropius at the R.I.B.A. on Tuesday last. In introducing Professor Gropius, he gave an account of the early stages of his career. It was, he said, often the case that one learnt most from those from whom we differed most. Before coming to this exhibition he had spent some time walking around the Royal Academy, and was struck by the contrast with the work in the Gropius exhibition, which was very pronounced. "I am convinced," he said, "that this modern architecture is not merely a new fashion, like a lady's bonnet. I am growing old, and the result of that is that one cannot expect to love and understand the new shapes and types of beauty and conception as one does the old, with their traditions and associations." The speaker also paid a tribute to Mr. Maxwell Fry, who had worked hard to bring about the exhibition.

Professor Gropius thanked the Institute for the privileges and kindness shown him, and said that the new style of architecture, in a manner, corresponded to the change from manual to machine production.

COMPETITION NEWS

Municipal Building, Gillingham, Kent.

Gillingham (Kent) Council have decided to obtain competitive designs for a proposed town hall and municipal building.

Proposed Houses, Oswestry.

Local architects are to be invited to submit plans in competition for 50 non-parlour type houses which the Town Council is to erect as the first year's programme of its slum clearance scheme.

Proposed Council School, Bedford.

One hundred and ten applications have been received from architects in connection with the proposed London-road Council School, for the Bedford Town Council's Education Committee. Mr. J. R. Leathart, F.R.I.B.A., the adviser and assessor, is to select six architects, and the choice will be confirmed at the Committee's meeting on May 23.

Design of Modern Houses.

The result of the competition for the design of modern houses, advertised in *The Builder* for January 19, under Box Nos. 223 and 498, is as follows:—£1,200 house: winner, Mr. W. J. Reeve-Smith, 1, Lyndhurst-road, Weston-super-Mare; £900 house: winner, Mr. Norman J. Skeet, 20, Rutland-avenue, Withington, Manchester.

New Cemetery Chapels, Birmingham.

Designs for the proposed new chapels at Quinton and Yardley Cemeteries submitted by ten Birmingham architects in the architectural competition arranged by the Parks and Cemeteries Committee, have now been adjudicated upon by Mr. Edwin F. Reynolds, F.R.I.B.A., of 57, Colmore-row, Birmingham. In each case the winning entry was that of Mr. James A. Swan, F.R.I.B.A., Daimler House, Paradise-street, Birmingham, who designed both chapels on a cruciform plan, surmounted by a central octagonal lantern. Externally the designs are modern treatments in brick and tiles, based on traditional lines. Internally a dignified simplicity has been achieved, avoiding a sombre and depressing effect, with a spacious and well-lit building. The cost of the work will be about £16,000.

The awards in the competition were as follows:—

Quinton Chapel.—1, Mr. James A. Swan, F.R.I.B.A.; 2, Mr. Holland W. Hobbiss, F.R.I.B.A., 33, Newhall-street; commended, Messrs. Harvey and Wicks, 5, Bennett's-hill; Mr. S. N. Cooke, F.R.I.B.A., Sun Buildings, Bennett's-hill.

Yardley Chapel.—1, Mr. James A. Swan, F.R.I.B.A.; 2, Mr. John B. Surman, F.R.I.B.A., 19, Cannon-street; commended, Messrs. Batemans, 18, Bennett's-hill; Mr. Holland W. Hobbiss, F.R.I.B.A., 33, Newhall-street; and Messrs. Harvey and Wicks, 5, Bennett's-hill.

CURRENT COMPETITIONS.

	Particulars published in	Sending-in date.
Competition for an "Ideal Village," promoted by the proprietors of *The Builder*. Premiums of £50, £15 and £10. Mr. D. Barclay Niven, F.R.I.B.A., assessor	"Builder." Jan. 19	May 29
Competitions for designs for fireplaces. Organised by Iffley Brick Fireplaces Co., Ltd., and Building Centre. Prizes: £25, £10 and £5. Details from Building Centre, 158, New Bond-street, W.	April 27	June 11
Stand for Venesta, Ltd., at Building Exhibition. Prizes of £100 and four of £10. Jury of assessors. Conditions from Venesta, Ltd., Vintry House, London, E.C.4. Limited to architects under 30 on Jan. 31, 1935	April 6	June 23
Council offices, Slough, for U.D.C. Mr. H. S. Goodhart-Rendel, F.R.I.B.A., assessor. Premiums, £250, £150, £100.	March 23	June 26
School for 850 at Dudley, for Education Committee. Mr. H. T. Buckland, F.R.I.B.A., assessor. Limited to architects within 15-mile radius.	April 13	July 16

(Other brief details held over.—Ed.)

CORRESPONDENCE

Architects' Unemployment Relief Scheme: Proposed Exhibition of Work.

SIR,—May I have the use of your columns to make the following appeal?

We are having an exhibition towards the middle of June of the work that has been done under the Architects' Unemployment Relief Fund. The work done will include measured drawings of seventeenth and eighteenth century architecture in London, surface utilisation maps and maps showing the height of buildings in the more densely populated parts of London, models, strip drawings of the principal London thoroughfares, town-planning schemes and other matters of architectural and public interest.

It is desired to make the exhibition as representative as possible of the emergency work which architects have done during the difficult days of unemployment, and the Committee feel sure that much material might be suitably included from what has been done by architects in occupational centres. If any architects have such drawings and photographs we should be interested to see them and should be glad to include them in a special section in the exhibition.

MAURICE E. WEBB, Chairman,
Architects' Unemployment Committee.
9, Conduit-street, W.

Early Eighteenth-Century Houses, Clapham Common.

SIR,—Our attention has been drawn by the Director of the Industrial Institute to the fact that there is a last moment opportunity of preserving from demolition a row of some twelve houses on the north side of Clapham Common. They are of the Queen Anne period, and a local tradition hints that they were designed by Sir Christopher Wren himself between 1713 and 1720. Whatever be the truth behind the tradition there is no doubt that the houses do form one of the few notable examples still remaining of London domestic architecture of that period. The fine brickwork delights the eye from without, and within in a number of the houses are the staircase and panelling and interior decoration in the original harmony. Additional interest is imparted from the distinction of early occupants, Captain Cook, for example, having lived in number 23. The panelling of number 16 was acquired by the London Museum when destruction was threatened some time ago.

After attempts to secure approval of plans for clearing the site and erecting a large block of flats, it has now been decided to put the whole property up to auction about the middle of this month. Immediate action is, therefore, needed. If support be forthcoming, the old Row, with its own physical beauty and its memorial of historic yesterdays, can be saved and land immediately behind can be bought and a treasure secured. A local resident has been doing his best to find a purchaser for each of the old houses. He has got together a group of persons who wish to buy, recondition and occupy eight of the twelve houses. It remains to find only four more of similar mind, and, in addition, another twelve able and willing to buy the twelve small, two-story houses it is proposed to erect on the ground behind the Row. The scheme provides for the erection of garages for the whole of the houses, both old and new, and two tennis courts can be accommodated.

There must be those who are sensitive and sympathetic to the charms and appeal of these rare and beautiful residences, and there must be many others who will rejoice to know of the proposed small modern houses, quiet and sequestered, between the open space of Clapham Common and the large garden of the old rectory. It is worth remembering, too, that whilst the situation is very quiet, it is specially convenient, roads radiating from it to all parts of London over Blackfriars, Waterloo, Westminster and Vauxhall bridges. The site is freehold property, and it is proposed to form a trust in which the freehold can be vested and the permanent preservation of the Row ensured. It is estimated that a dividend of, say, 4 per cent. can be available on amounts subscribed.

The proposal we have outlined has the preliminary blessing of the Town Planning Committee of the London County Council, and, indeed, is in chime and keeping with the desire to safeguard the amenities of the immediate environments of the London parks and pleasaunces. If funds permit, the suggestion has been made that one of the houses in "Wren's Row" should become a museum of local history. A sum of about £7,000, in addition to the funds already forthcoming, will, it is estimated, permit of the purchase of the Row, and a further sum, estimated at about £9,000, will be needed for the purchase of the land behind the Row. We believe that this expression of our desire and purpose in your columns may bring into play the generous good will of those to whom the memorials of the past are worthy of love and care.

Communications on the subject of this letter should be addressed to the Secretary, The National Trust for Places of Historic Interest or Natural Beauty, 7, Buckingham Palace-gardens, Westminster, S.W.1.

ESHER, Chairman of the Society for the Protection of Ancient Buildings.
ZETLAND, Chairman of the National Trust for Places of Historic Interest or Natural Beauty.
E. GUY DAWBER, A.R.A., Past President of the R.I.B.A.
J. C. V. DURELL, C.B.E., Rector of Clapham. Hon. Canon of Southwark.
ALWYN LLOYD, F.R.I.B.A., President of the Town Planning Institute.
PERCY W. LOVELL, A.R.I.B.A., Secretary of the London Survey Committee.
GILES GILBERT SCOTT, R.A., President of the R.I.B.A.
RAYMOND UNWIN, Past President of the R.I.B.A.
A. G. WALKDEN, Past President of the Trade Union Congress.

THE ARCHITECTS' BENEVOLENT SOCIETY

THE annual general meeting of donors and subscribers of the Architects' Benevolent Society was held in the rooms of the R.I.B.A. on Wednesday, May 9. The President of the Society, Sir Giles Gilbert Scott, R.A., P.R.I.B.A. was in the chair. Among those present were Mr. Walter Tapper and Mr. H. S. E. Vanderpant, vice-presidents, Mr. Maurice E. Webb, honorary treasurer, and Messrs. Charles Woodward, E. Stanley Hall, Maxwell Ayrton, A. Saxon Snell, J. Alan Slater, E. P. Warren, C. H. Brodie and E. Hadden Parkes.

The annual report of the Council stated that the work of the Architects' Unemployment Committee which was one of their main activities last year had been continued. That fund was started by Sir Raymond Unwin during his presidency to help to relieve unemployment among architects by providing emergency work. It was organised through the Architects' Benevolent Society, the money being obtained by subscriptions and donations from architects and architects' staffs. £3,865 18s. 1d. was received last year, £250 of which was a donation from the R.I.B.A. Work had been continued through the London Society and the London Survey Committee under Mr. Percy Lovell, the organising secretary of both societies, and through the Architectural Graphic Records Committee. The main committee was under the chairmanship of of Mr. Maurice E. Webb. Mr. J. Alan Slater presided over the Case Committee which dealt with applications for work. During the two years that the Unemployment Fund had been in existence, the Benevolent Society had administered £11,021 10s. 11d. in unemployment relief and given work to 113 men. As the fund was established to meet an emergency which it was felt was now passing over, the Committee did not consider the scheme in its present form could be continued indefinitely. They were convinced, however, that there was need for a permanent Employment Scheme, and they hoped when the emergency scheme was wound up to put forward a permanent scheme which would continue on a different basis the useful work that had been begun. Eighty-six applicants had been helped during the year. Forty-two of these were architects and architects' assistants, thirty-nine were widows and five orphans. The amount given away in grants was £1,670. As usual, fourteen pensions had been paid, the sum of £723 having been distributed. The council regretted that during the past two years the amount given in grants had had, in many cases, to be curtailed owing to lack of funds, and they earnestly appealed for further subscriptions. Only those who sat on the council could know how distressing many of the cases were that came up for consideration and how disproportionately little the Society could do with its present funds to help them. While thanking all who had contributed and were contributing to the Society, they hoped that those others who had not yet given either a subscription or a donation would come forward now when help was so badly needed and give their support.

The President, in moving the adoption of the annual report, said that an early report gave tabulated particulars of the four original cases that were helped. Those four cases were typical of the applications which the council had to deal with at the present time, but where there were four applications there were now a hundred. In reading the annual report for last year, and noting the record of work done, and that the Society had now an invested capital of £35,258, and an annual income of £3,000, it might seem that they might now rest on what they had accomplished, and that the Society would go forward on its merits without exertion on their part. That was not so. The history of the Society showed that every step forward had been taken as the result of a special appeal for help. "Why should not our list of subscribers include the name of every architect in the country?" the original promoters asked. When he reminded them that they had only 1,276 members and that the membership of the Institute and the allied societies was approximately 13,000, they would see that they were very far indeed from realising their aim. "Let us each try," the President concluded, "to make it more widely known and enlarge the list of donors and subscribers by personal canvassing among our friends."

On the motion of Mr. H. S. E. Vanderpant, seconded by Mr. Charles Woodward, the Council for the ensuing year 1934-35 was elected as follows:—President, Sir Giles Gilbert Scott, R.A., President R.I.B.A.; vice-presidents, Mr. Walter Tapper, A.R.A., F.S.A., P.-P.R.I.B.A., Mr. H. S. E. Vanderpant, Hon.A.R.I.B.A. Ordinary members: Messrs. Charles Woodward (A.), Maxwell Ayrton (F.), C. McArthur Butler (L.), J. Alan Slater, M.A., Cantab. (F.), A. Saxon Snell (F.), E. Stanley Hall, M.A. Oxon. (F.), A. H. Moberly, M.A., Cantab. (F.), Sydney D. Kitson, M.A., Cantab., F.S.A. (F.), Michael Tapper, M.C. (A.), R. E. Enthoven (F.), Arthur Keen (F.), W. Curtis Green, R.A. (F.), F. R. Hiorns (F.), A. Hunter Crawford (F.), H. Chalton Bradshaw (F.), Francis Jones (F.) (representing the Manchester Society), C. M. Hadfield (F.) (representing the Sheffield, South Yorkshire and District Society), Ingalton Sanders (F.) (representing the Hampshire Society), the Hon. Humphrey A. Pakington (F.) (representing the Architectural Association), Arthur Crow (F.) (representing the London Society), C. McLachlan (A.) (representing the Association of Architects, Surveyors and Technical Assistants), E. Hadden Parkes (F.) (representing the Mount Pleasant Artists' Rest Home). Honorary treasurer, Mr. Maurice E. Webb (F.). Honorary secretary, Sir Charles Nicholson, Bart. (F.). Honorary auditors, Mr. Charles Woodward (A.), and Mr. H. S. E. Vanderpant, Hon.A.R.I.B.A.

ARCHITECTURE AT THE ROYAL ACADEMY—II.

FROM the point of view of scale, next in importance to the ecclesiastical section comes that of public buildings. Of these, the half-inch detail of the Threadneedle-street entrance to the Bank of England, presented by Sir Herbert Baker, R.A., and Mr. A. T. Scott, in a fine drawing by Mr. Jamison, is the kind of clear presentation of which we should like to see more in this annual exhibition, especially when, as here, representing architecture of considerable scholarship and refinement. (No. 1390.)

Mr. Arthur J. Thomas indulges in the Renaissance motif, rather than the classics, in his design for the new Town Hall, St. Pancras; but handles the irrelevancies and inconsistencies of the style with real taste and dignity, to which Mr. Farey has done full justice. (No. 1327.) We have already referred to the Office of Works exhibits, and we should do less than justice if we did not commend Mr. Hanton, Mr. Llewellyn, and Mr. Seccombe, on their talented team work, in a tradition which their department has now fully established. It is, indeed, refreshing to see the scope for originality which there is within a manner. (Nos. 1338, 1401, 1356, 1374, 1471 and 1472.)

No. 1381, Norwich Municipal Buildings, by Messrs. C. H. James and S. R. Pierce, is a sensible brick treatment, with rather fierce diaper work, but their study for the front elevation of the Police Station (No. 1399) is in a depressed classic mood, which is not attractive either in architecture or draughtsmanship. In marked contrast is Mr. Maurice E. Webb's Government House, Cyprus, which is a very happy composition. Nearby is another overseas Government building, by Mr. John A. Hoogterp, in a broad classic treatment, which Mr. Walcot, not quite at his happiest, illustrates.

Mr. Percy Thomas exhibits an interior of the Great Hall to Swansea Civic Centre, in which are to be housed the Brangwyn panels. An impressive setting is assured, and there is a masterly touch about the interior—and surely it is the interior treatments which tax a master's talents. Mr. Walcot is the perspective artist, and reveals his old form. Mr. Robert Atkinson's two exhibits of Hackney and Wallington Town Halls seem to miss, in some degree, the opportunity for an expression of civic dignity. (Nos. 1380 and 1382.)

Hospitals, hostels, schools, and colleges cover another group with certain common characteristics. One of the best is No. 1328, Scarborough Hospital, by Mr. Wallace Marchment, a hospital expert with successes dating from the immediate post-War days. In this example he applies, with marked ability, the modern motif in brickwork to the practical needs of the problem. The cheerful rendering by Mr. Farey is also contributory to an excellent exhibit.

Mr. Edward Maufe appears in somewhat "in and out" form in London Hospital Students' Hostel. The modern massing seems out of harmony with the enormous mansard slope of the main block, but the arcaded and vaulted entrance loggia is quite delightful. Mr. Pilkington's drawing is somewhat muddy. (No. 1326.)

Sir Giles Scott, R.A., shows two new school houses to Ampleforth College, Yorkshire, relying upon good texture and massing to produce impressive architecture, nicely rendered by Mr. Leslie K. Watson. (No. 1353.) Mr. Arthur L. Roberts also shows restraint and harmony in the Children's Home, Romsey, which Mr. Farey illustrates in his capable style, with a very able foreground. (No. 1372.)

A steep bird's-eye view of the Devonport Nurses' Home and School of Pathology, Seamen's Hospital, Greenwich, is shown by Sir Edwin Cooper, A.R.A., in which an honest traditional treatment is given less than its due by this manner of representation. (No. 1379.)

Sir Edwin also shows Additions to St. Hilda's College, Oxford (No. 1407), comprising a new library and students' rooms over. The treatment is safe and scholarly and worthy to rank with the other fine works of this architect. His "Shipping Office" (No. 1429) is familiar, but retains its freshness.

The Nurses' Home, Green Lane Institute, Patricroft (No. 1385), is a pleasing subject, as much to the credit of its designer, Mr. Stephen Wilkinson, as its drawing is to Mr. Frank Waddington. The alternation between pedimented windows and stone bays is a happy articulation. Contrasting with this is Messrs. William A. Pite, Son, and Fairweather's Beaumont House Nursing Home (No. 1365), in which a sequence of square bays lacks interest.

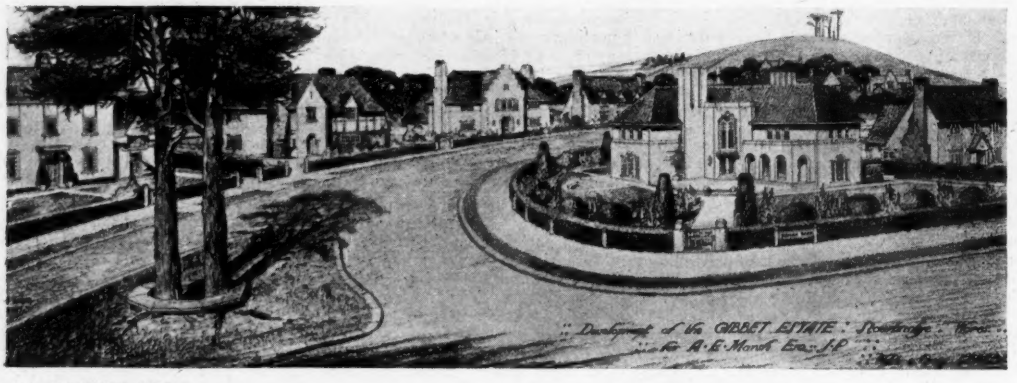
The fearless combination of modern forms and surfaces, with traditional touches of detail, in the Welcome Research Institution, N.W., by Mr. Septimus Warwick, is much to be commended. (No. 1409.) Messrs. W. G. Newton and Partners' Merchants Taylors' School Boarding House (No. 1344) is quiet and refined, if hardly significant enough for an exhibition of this importance. Mr. E. J. Thring's perspective shows a nice sense of tone. In contrast to the architecture of this last, the same architects show a utility science block, which is no doubt efficient, but seems to lack the artistic interest one expects in the gallery. (No. 1345.)

A striking exhibit from a purely decorative point of view is the Friends' College, Union University, Changtee, West China, entrance gate and lodge, by Mr. Arnold Silcock (No. 1396); and, on more purely architectural lines, Mr. Verner O. Rees exhibits great talent in a brick treatment of Extensions to the Sir John Cass Technical Institute, E.C., the fine architecture of which is well portrayed in a good drawing by Mr. Farey.

Another interesting section, both from the point of view of architectural scale, and social aptness, is that dealing with flats and tenements, of which there are nearly a dozen interesting examples, including a well executed model by Mr. Arthur Wm. Kenyon, of "Mulberry House," Bethnal Green, E., for the East End Dwellings Company. (No. 1460.) This exhibit shows to the full the merits of this form of presentation. In No. 1339, Mr. Farey illustrates a similar subject by the same architect.

Mr. Michael Rosenauer's "Troy Court," Kensington High-street, W., is an extremely able composition in an unaffected style, which Mr. Walcot illustrates very beautifully. This (No. 1340) is possibly one of the best exhibits in the gallery.

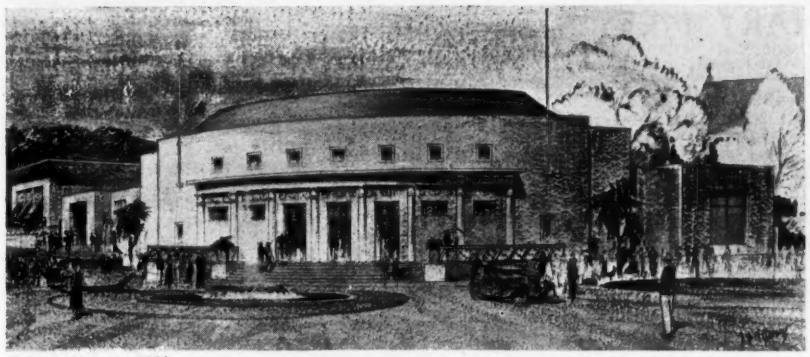
Dulwich College Homes, by Messrs. Beresford Pite and Partners, is in a somewhat confused style, yet of some quality. (No. 1342.) Mr. Louis de Soissons is not at his best in flats in Lower Kennington-lane, Duchy of Cornwall Estate. A block of flats, "Woodstock Close," Oxford, by Mr. R. Fielding Dodd, is, however, entirely satisfying. (No. 1360.)



R.A. EXHIBITION, 1934.

DEVELOPMENT OF THE GIBBET ESTATE, STOURBRIDGE, WORCESTERSHIRE.

Messrs. WEBB and GRAY, LL.R.I.B.A., Architects.



R.A. Exhibition, 1934.

ASSEMBLY ROOMS, COLWYN BAY: The Main Entrance.
PROFESSOR STANLEY D. ADSHEAD, F.R.I.B.A., Architect.

Mr. P. D. Hepworth applies interesting ideas to good architectural form in Tenement Flats, Bestwood-street, E.C., illustrated with delicate draughtsmanship and tinting, and Mr. Stanley Peach exhibits an appealing subject in "Crompton Court," S.W., in which there is a nice use of brick, stone and shuttering. Mr. A. Bryett's colour work is most capable. (No. 1408.) "Cranmer Court," Chelsea, by Mr. S. Gordon Jeeves, has some impressive quality, if only in the courage of repetition. (No. 1470.)

The small show of purely commercial buildings is a commentary upon economic events, and we shall expect to see this section of the exhibition very much fuller next year, if the good and apparently well-founded hopes of the present times do not flatter but to deceive. Amongst those to be seen, the exhibit of Sir Reginald Blomfield, R.A., stands out from its fellows. No. 1397, New Premises, "The Headrow," Leeds, shows a most imaginative free use of the classics. Mr. Marcus E. Collins contrives an interesting town building out of the material of stone mullions and gabling, illustrated by a drawing of good, honest colouring by Mr. W. Warman. Good draughtsmanship is also shown in the illustration of the Mersey Tunnel, George's Dock Ventilation, and Control Station, Liverpool, by Mr. Donald Bradshaw and Mr. George Kenyon, to designs for which Mr. Herbert J. Rowse is responsible. Another worthy exhibit is that by Messrs. Val. Myer and Watson-Hart, representing "Halifax House," Strand, with an interesting massing up, which Mr. Farey has faithfully recorded. (No. 1387.)

Two exhibits by Mr. J. J. Joass are somewhat disappointing (Nos. 1332 and 1333), while No. 1386, by Sir Edwin Cooper, A.R.A., and No. 1406, by Mr. S. Stanley Peach, are rather of the workaday world, though interesting records of commercial expression. Two illustrations of licensed premises also fall under the head of commercial buildings (No. 1388), Mr. Alfred W. Blomfield's Proposed Licensed House, Hamsey Green, Warlingham, is an attractive building, striking the right note of invitation and dignity, qualities not always easy to reconcile. The drawing, by Miss Norma Worall, is also capable. The other example (No. 1480) is by Mr. James S. Swan, and shows a very interesting modern interior, of the Giffards' Arms, Wolverhampton.

Theatres, cinemas and places of recreation and amusement are also few and far between in the exhibition. Messrs. W. H. Watkins and E. M. Willmott show a nice respect for the City of Bath in a traditional theatre. The rendering, by Mr. Hepworth, is a little anæmic. (No. 1394.) Three exhibits by Mr. Stanley D. Adshead of the Pier Pavilion and Assembly Rooms, Colwyn Bay, show fluent expression in a light Regency manner. (Nos. 1334, 1349 and 1375.)

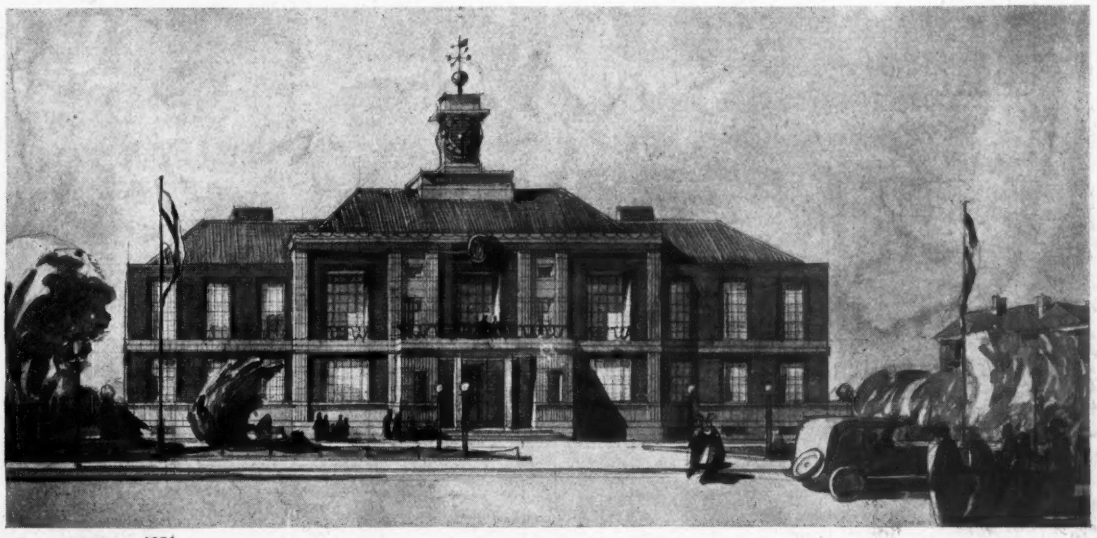
The Sports Pavilion at St. John's College, Cambridge, is a very charming work by Messrs. Wigglesworth and Marshall Mackenzie, FF.R.I.B.A. (No. 1469.) A model of the Jockey Club, Newmarket, Messrs. Richardson and Gill, architects, lacks much of the usefulness of a model by being rendered in plain white, which expresses the values of solids and voids and the play of texture perhaps less usefully than a good colour perspective.

There are one or two development schemes and examples of town architecture which deserve comment. No. 1373 is an estate development in Worcestershire, by Mr. George F. Webb, which shows a nice sense of contour. In urban manner comes Sir Reginald Blomfield's scheme for the development of Piccadilly-circus, following the lines with which we are already familiar. The drawing is shown on page 848. (No. 1393.) Mr. Arthur J. Davis, A.R.A., shows his Adelphi Scheme, which has a pleasant corrugated effect of bays, with a more gentle tower mass than its neighbour, "Shell Mex House." (No. 1404.) It was published in our last issue.

Two contrasting town buildings have nothing but merit in common. Messrs. W. Curtis Green and Partners' Scottish Widows Fund Society London Office, Cornhill, is pleasant, gentle massing in fresh tradition (No. 1400), while Messrs. Paxton, Watson and Son's Corner Building, in Reigate, is a charming little composition on a rising corner site. (No. 1343.)

In the field of pure studentship, Mr. Colin St. C. Oakes exhibits a careful Restoration of a Temple, on the Acropolis at Lanuvium, which shows some rather amazing colour and detail suggestions, the authenticity of which we are not prepared to challenge. (No. 1428.)

(to be concluded).



R.A. Exhibition, 1934.

NEW TOWN HALL, WALLINGTON, SURREY.
MR. ROBERT ATKINSON, F.R.I.B.A., Architect.

R.I.B.A. CENTENARY MEETING

THE hundredth annual general meeting of the Royal Institute of British Architects was held at No. 9, Conduit-street, W.1, on Monday. Sir Giles Gilbert Scott, R.A., presided.

The President, in moving the adoption of the report, made a passing reference to the historic event, and explained that the centenary would be more fittingly celebrated when the new headquarters of the Institute in Portland-place were officially opened in October. He noted with satisfaction, however, that this year the number of societies allied to the Institute throughout the Empire had increased to 100. That alliance was one of the lesser but very important bonds of Empire.

Mr. Gilbert H. Jenkins then gave an account of the formation of the Institute and of the major points in its history over the past hundred years. Coming to a review of the hundredth annual report, in spite of losses by death, the Institute's membership had increased by over 250, and with this increase the work of the Council and of the staff had also extended in many directions. In addition to the Standing Committees, which were elected by the general body of members, the Council had appointed no fewer than twenty-five special committees who had investigated and reported upon such widely differing subjects as aerodromes, architectural education, slum clearance, the standard form of building contract, town planning and housing, the new building, competitions, and public relations.

An amusing slip had been made over the London Architecture Medal, which the Institute presented annually for the best new building of the year, as it was recorded that in 1934 it was given for an elevation only. Usually the medals were given to some monumental building, but the Council might consider, suggested Mr. Jenkins, the desirability of awarding a special housing medal, for houses not exceeding £1,500 in cost, or groups of houses, and for blocks of flats, in alternate years.

In regard to registration, it was interesting to note that, while about eleven thousand persons had placed their names on the Register, the Royal Institute had over seven thousand five hundred fully qualified members.

The report mentioned that the revised scale of charges was approved and issued in July, 1933. A leaflet inserted in it suggested that all members should present a copy to their clients as early as possible after being commissioned. Many members, it might be feared, would hesitate as to the expediency of that course, as long as the first part of the scale remained in its present form. Clauses (*d*) and (*e*) would appear to place the architect in the position that he would have to carry out a design he had not fully developed, or run the risk of the client repudiating payment of his fees, on the ground that he had broken his contract of engagement. The new building in Portland-place, which would be opened next session, was a fine example of what a skilful architect could do in improving his plan in the course of working out the details. It was manifestly both impossible, and undesirable in the client's interests that the latter should be consulted on every deviation in the design before it was passed to the builder for execution. In the same manner, the architect must have reasonable latitude over expenditure; 10 per cent. was allowed him on public competition designs, so why nothing in the scale of charges?

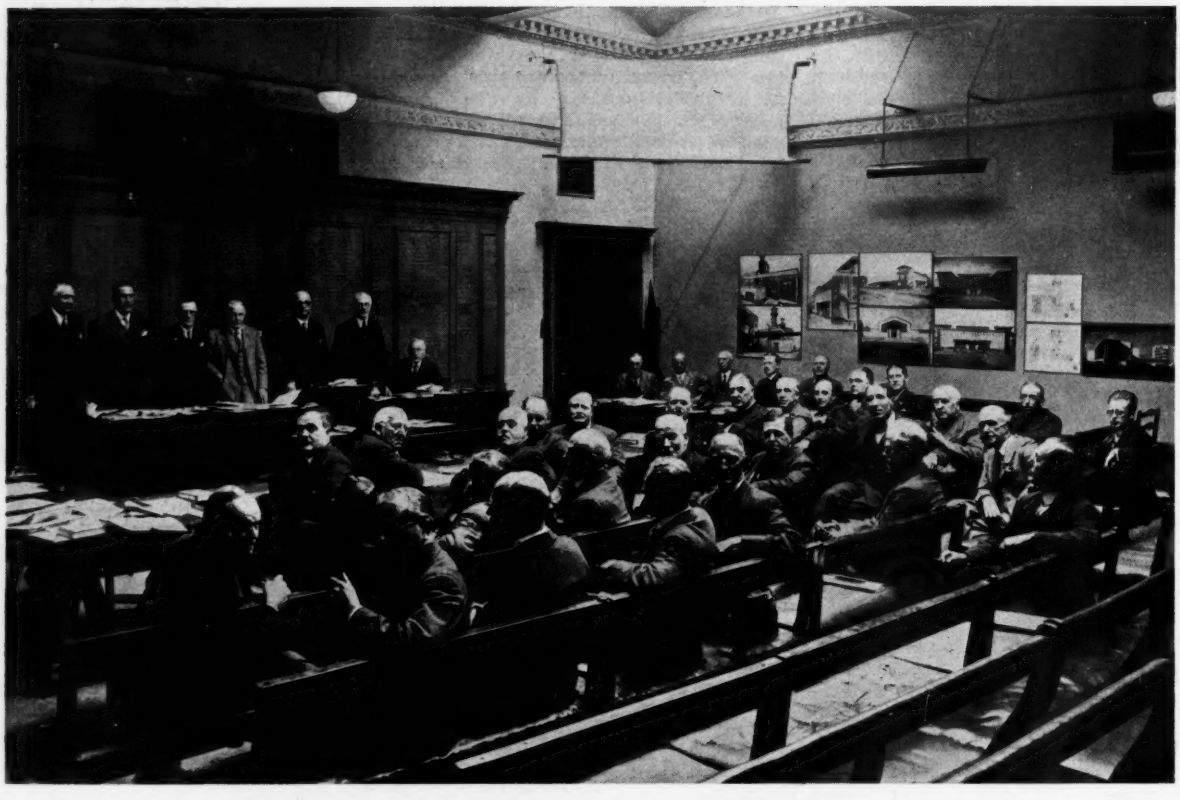
Again, Clause (i) seemed to invite the difficult client to cause trouble. It afforded no real protection to the architect, and surely it was not to the good of architecture that the client should be told he had power to dismiss the architect at any moment. Many a fine building had been marred in its completion by death removing the master mind who designed it. Possibly common law might give the client that power to revoke the architect's appointment, but there was no need to shout it at him at the commencement of the work.

It was to be hoped that in the new building there would be some exhibitions dealing with those arts and crafts which were nearly entirely dependent on architecture. The sculptor, decorative painter and craftsman had suffered in an even greater degree from the slump than the architect, and, if the latter did not soon go out of his way to offer them some encouragement, the country at large would suffer from the loss of a fine body of men skilled in the building arts.

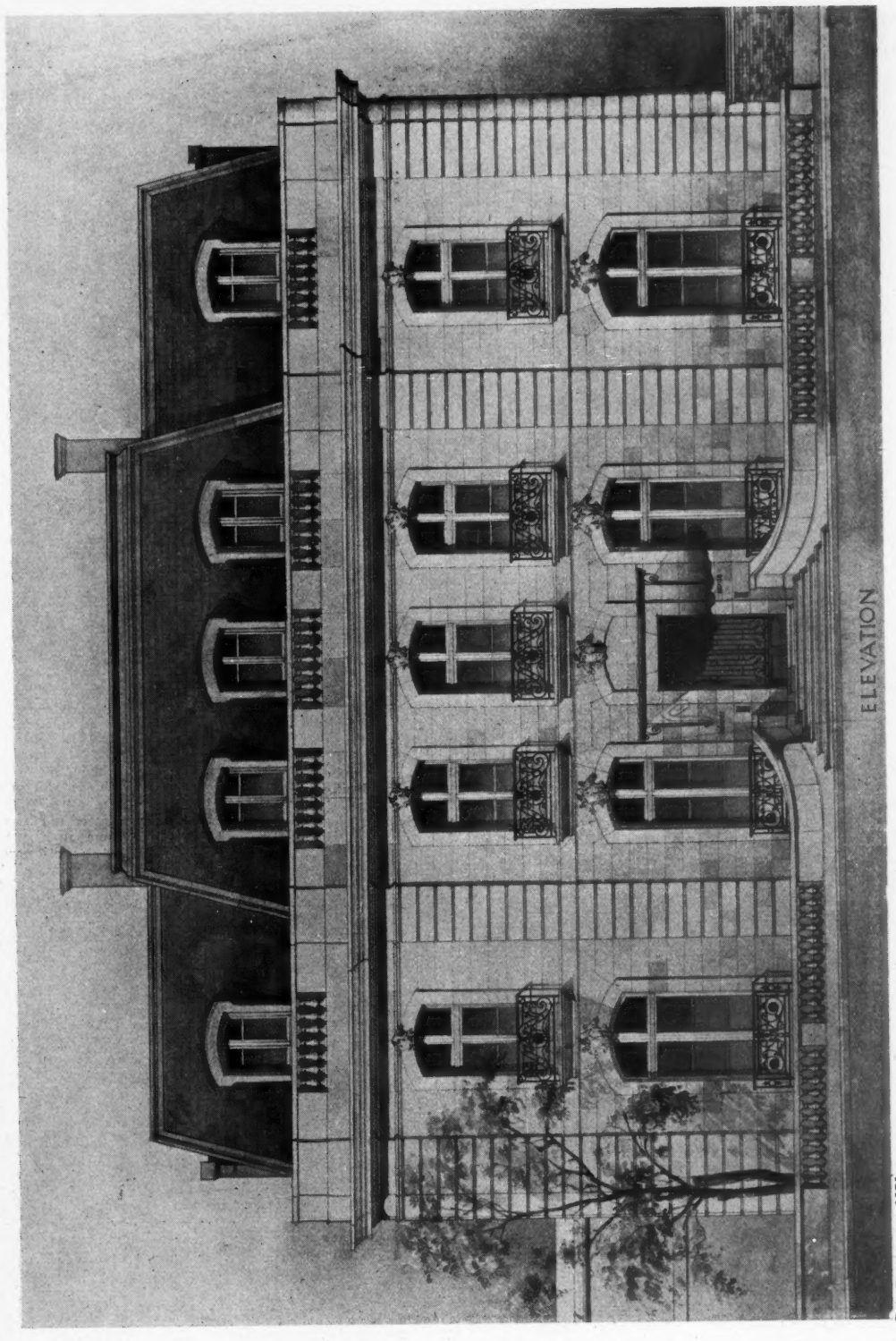
The new Form of Contract was in process of being forged into a more perfect instrument. He suggested an amended blank form of certificate should be issued. The contract lays down that the employer only had a lien on materials delivered, but not fixed, if the architect who included them in the certificate so certified. To avoid the chance of a charge of negligence against him, every architect's certificate form should have printed on it the words: "Including unfixed materials delivered on site," which could be crossed out if not needed.

The Competitions Committee had again endeavoured to perfect the Regulations, and had tightened those relating to small limited competitions. Evidently they tried to protect the architect against almost every ill-wind that could blow. Would it not be possible to consider more fully the doubts and fears of the public, as represented by a local authority or a board of directors?

Two competitions, of which he knew, were nipped in the bud because promoters were given to understand that, if held, they would be bound to accept the assessor's choice even although they hated the design. Could it not be made clear that, once the best design had been selected, both assessor and designer would be at the disposal of the promoters in advising them as to what modifications could be made to give them not only a fine building, but the kind of building desired? Clause 2 (*f*) was a faint-hearted attempt at this, but the point should be more forcibly stated and be embodied in the first paragraph.



THE ONE-HUNDREDTH ANNUAL GENERAL MEETING OF THE R.I.B.A. HELD ON MONDAY, MAY 14.



MÉNARS HOUSE, 11a, BELGRAVE SQUARE, S.W.

MR. ARTHUR J. DAVIS, A.R.A., F.R.I.B.A., Architect.

R.A. Exhibition, 1934.

ILLUSTRATIONS

PLATES.

Royal Academy Exhibits.

We give this week some further reproductions of architectural exhibits at the Royal Academy, brief descriptions of which are as follows :—

" Menars House," Belgrave-square, S.W.

This is a private house containing Regency panelling, the house having been designed to be in character with it. It contains an octagonal dining-room with Flemish pictures and a large drawing-room panelled in old French oak. The whole house is heated and lighted by electricity, which is also used for cooking. It is built of brick faced with cement and coated with Stic B.

Mr. Arthur J. Davis, A.R.A., F.R.I.B.A., is the architect.

" The Homestall," Sussex.

This is a large scheme of alterations and additions to an existing country house, incorporating an old early sixteenth-century hall, which has been demolished in another part of the country and is being re-erected in the new building. The contractors for the work are Messrs. G. E. Wallis and Sons, Ltd., of Maidstone, and the reconditioning of the old hall is being carried out on the site by Messrs. Hayward and Wooster, Ltd., of Bath.

Mr. E. Guy Dawber, A.R.A., P-P.R.I.B.A., is the architect.

Swansea Civic Centre: The Great Hall.

This hall is an important feature of the Swansea Civic Centre buildings, which are now being erected from the designs of Mr. Percy Thomas, F.R.I.B.A. It will house the Iveagh panels, by Mr. Frank Brangwyn, R.A., which were originally intended for the House of Lords. A description of the new buildings was given in our issue for June 9, 1933, together with a number of working drawings, further examples of which appeared in the issues for July 7 and August 4, 1933.

The Merchant Taylors' School: Boarding Houses.

The boarding houses at this school are grouped along the main east to west private road which runs through the whole estate. The Merchant Taylors' School was fully described in our issue for May 5, 1933. Messrs. William G. Newton and Partners are the architects.

Pier Pavilion, Colwyn Bay.

This pier pavilion takes the place of the old pavilion which was destroyed last year by fire, as also was its predecessor. It is an entirely fireproof building, and the construction is specially designed to give extreme lightness with protection from very severe weather. The building consists of a large hall or assembly room, with a small stage suited for the concert party type of entertainment, and it is laid with a maple floor for dancing : adjoining is a tea room. It is erected on the site of the old pavilion, which occupied a projecting bay on the west side of the pier near the entrance. For this reason it has been planned as a building facing the main axis of the pier, its principal façade being emphasised by two lighthouse towers. The decorations of the assembly hall were designed and carried out by Miss Mary Adshead. They are reminiscent of a gay canvas enclosure. The decorations of the tea room were designed and carried out by Mr. Eric Ravilious : these represent a ruined palace beneath the sea. The building itself was designed and carried out by Professor S. D. Adshead, F.R.I.B.A., in collaboration with Mr. Dunning, the engineer to the council.

Houses, King's Park Estate, Lymington.

Detached houses of the type illustrated are being erected near Lymington, Hants. The exterior walls are of 11 in. hollow construction, with hand-made sand-faced bricks from the Beaulieu brickworks, and red colour plain hand-made tiles, the garages having flat roofs. The windows are wood casements in squares and painted broken white, with front doors painted in viridian green stippled on the white ground, the wood surround being broken white. The internal walls are plastered and distempered in creams and yellows, with fireplaces formed of thin, light-coloured red bricks and tiled slips from the Beaulieu brickfield, the hall floors being tiled with red quarries. The bathroom and kitchen are white tiled, hot water being from Ideal type boilers, and cooking by gas and lighting by electricity. Hedges are being planted on the front boundary, which has oak gates designed by the architect, Mr. Spencer H. Lawrence, L.R.I.B.A. The builders are Messrs. C. T. Webb & Sons, of Beaulieu.

A Church in Essex.

This church is designed on simple and straightforward lines in 2 in. facing bricks, with an Italian tiled roof. The nave has lofty proportions, and the side aisles and entrance project with a flat roof around. The tower does duty as choir vestry, organ loft and bell gallery, and a small Lady Chapel is on the south side of the chancel. The seating accommodation is for 350. The interior decoration is in simple style; walls are finished in rough plaster, and the steel truss roof to the nave has a suspended semi-circular ceiling, and is plastered in continuation of the walls. Heating is by electricity throughout, thermostatically controlled.

Mr. John Leech, L.R.I.B.A., is the architect.

Assembly Rooms, Colwyn Bay.

This is a group of buildings comprising an assembly hall, a palm court and a garden café, designed to be placed on a site known as the Rydal Gardens. The intention is, as far as possible, to preserve these gardens by removing the fences and setting the building back 50 to 60 ft. The assembly hall is designed to seat about 1,300 people, including 560 in the gallery. It is intended to be used as a conference hall, concert hall and theatre. The garden café faces due south, and is designed to be used as a dance hall on occasion. Between these two sections of the building there has been planned a palm court or lounge. The materials of which it is to be constructed are brick, cemented and distempered white. This should give value to the flowers which grow with luxuriance in the moist and mild climate of Colwyn Bay. The roofs are to be slated, and the main entrance to the assembly hall is well set back from the Conway-road by a fountain and carriage turn.

Professor S. D. Adshead, F.R.I.B.A., is the architect.

Other Illustrations.

Our other reproductions of exhibits at the Royal Academy include Sir Edwin Cooper's Devonport Nurses' Home and School of Pathology, Seamen's Hospital, Greenwich, and additions to St. Hilda's College, Oxford; Sir Reginald Blomfield's Scheme for the Completion of Piccadilly Circus; Mr. Walter Tapper's proposed alterations and additions to Elmstree Farm House, Gloucestershire; Mr. John A. Hoogterp's Government House, Lusaka, Rhodesia; and Mr. Herbert J. Rowse's designs for buildings in connection with the new Mersey Tunnel. Liverpool.

Church of St. Richard, Pagham.

The new church of St. Richard has been built to supply the needs of the rapidly growing Aldwick area of the parish of Pagham, near Bognor Regis. The church, which cost £12,500, has been built under the Bishop's Sussex Church Builders' Scheme. The church has been designed in stone in a traditional Sussex manner. The architect is Mr. F. G. Troup, of Horsham, and the church has been built by Messrs. Chapman, Lowry and Puttick, of Haslemere. It seats 450 persons and has a side chapel and bell tower.

THE A.A.S.T.A.

ANNUAL DINNER AND DANCE.

The annual dinner and dance of the Association of Architects, Surveyors and Technical Assistants was held on Saturday, May 12, at the Rembrandt Hotel, South Kensington, under the chairmanship of the President, Mr. R. Wynn Owen, F.R.I.B.A. Amongst those present were Messrs. W. Allison, A. N. Cathcart, R. Coppock, F. J. Maynard, Lt.-Col. T. C. R. Moore, W. McLachlan, Dr. Stradling, and Capt. Reeves, Secretary.

After the loyal toast, Lt.-Col. T. C. R. Moore, M.P., proposed the toast of " The Association of Architects, Surveyors and Technical Assistants." He said there were two things in which the Government had failed : one was unemployment, and the other housing. We must remain unhappy in seeing two million of our fellow-workers walking idly around. There were also a number of their own fellow-architects without work. Had the Government done their duty in providing houses for the country, there would have been no need for any architect or assistant to be unemployed.

The President, in responding, said that Lt.-Col. Moore would always be remembered among the members of the profession as the man who had piloted the Architects' Registration Bill through the intricacies of Parliamentary procedure. This measure had given the profession a legal status which it had desired for many years. That Association was concerned with the interests of a section of the architectural profession of this country which embraced more than 50 per cent. of the people engaged in that profession. Through a far-sighted provision in the Registration Act, it had received recognition as the representative body of all salaried men in the profession by being granted representation upon the Registration Council.

Thirty years ago architecture had been entirely carried out by private practising architects. To-day they found that nearly every concern, with the exception of private patrons of architecture, employed the services of the profession, not through the medium of the private practitioner, but through that of the salaried official architect. At the present time well over 60 per cent. of the architectural work in this country was being carried out by salaried official architects. He could see the time in the not far-distant future when private practice would be limited probably to a few specialists in various branches of the profession and a few practitioners who executed commissions for personal clients.

The Act had recognised the Association as the one body representing the salaried man, and had given it membership of the Registration Council in proportion to the number of registered architects among its members. Up to the present the Association had only one member on the Council, but so important was the position of the salaried architects to-day that the Association should make every endeavour to qualify for further representation by increasing its membership.

Responding to the toast of " The Visitors," proposed by Mr. F. J. Maynard, Vice-President, Mr. R. Coppock said, had it not been for the operatives the Government would not have realised the plight of the building industry. Speaking on the subject of town planning, he said they could not replan the country if they had factories in 1934 which were in fact built in 1834. The civilisation of the nation depended on the architect. It was our buildings that created confidence and not politicians. It was building that made a nation stable; therefore the prosperity of the country would be more assured when people saw more buildings being erected.

An Architect's Estate.

Mr. George Pearson, of Egmont-road, Sutton, architect, who died on January 7, aged 87 years, left estate value £7,152 4s., with net personalty £6,964 7s. 6d.

R.A. Exhibition, 1934.

THE DEVONPORT NURSES' HOME AND SCHOOL OF PATHOLOGY, SEAMEN'S HOSPITAL, GREENWICH.

SIR EDWIN COOPER, A.R.A., Architect.

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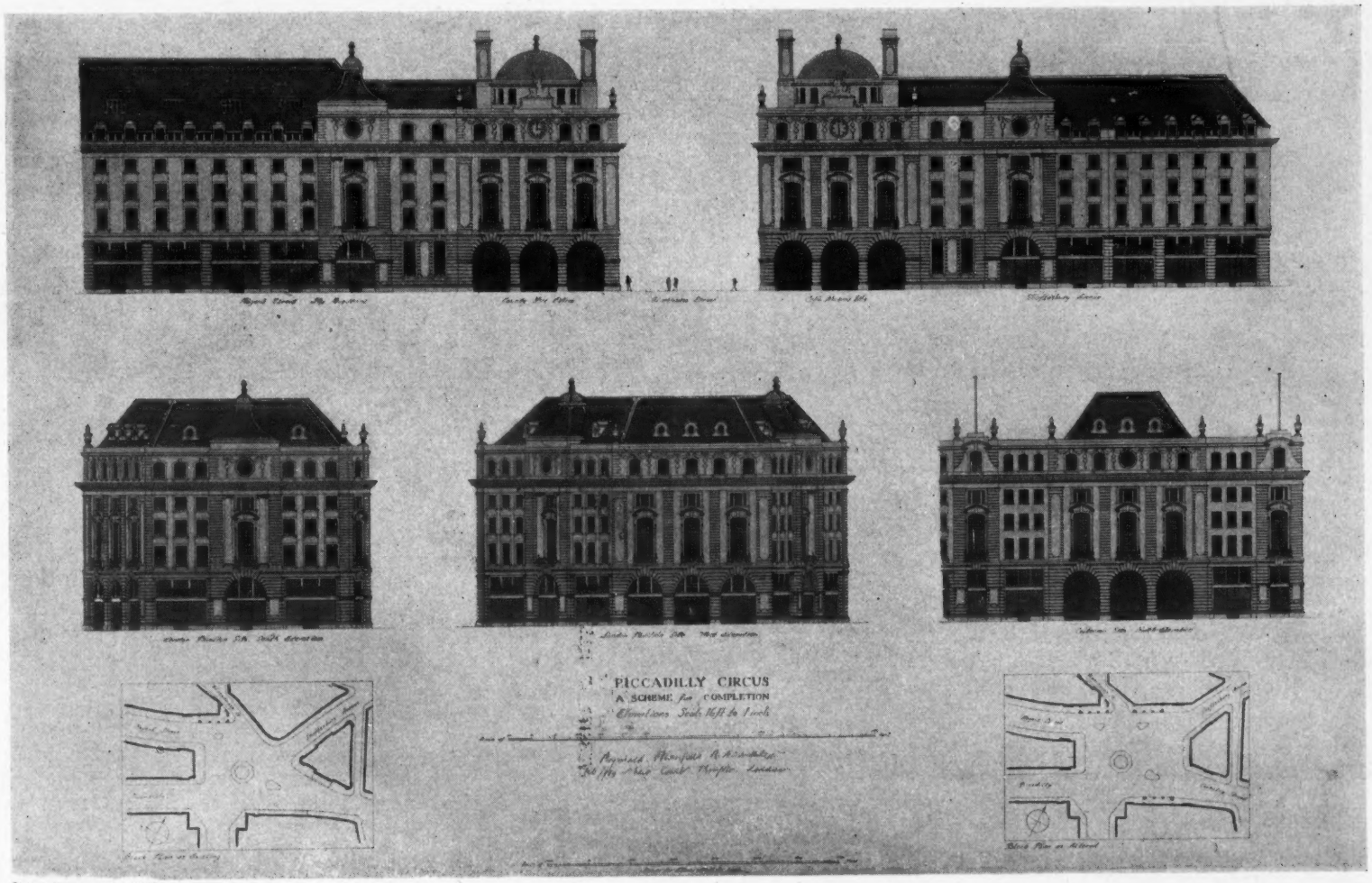

R.A. Exhibition, 1934.

SCHEME FOR THE COMPLETION OF PICCADILLY CIRCUS.

SIR REGINALD BLOMFIELD, R.A. P-P.R.I.B.A., Architect.

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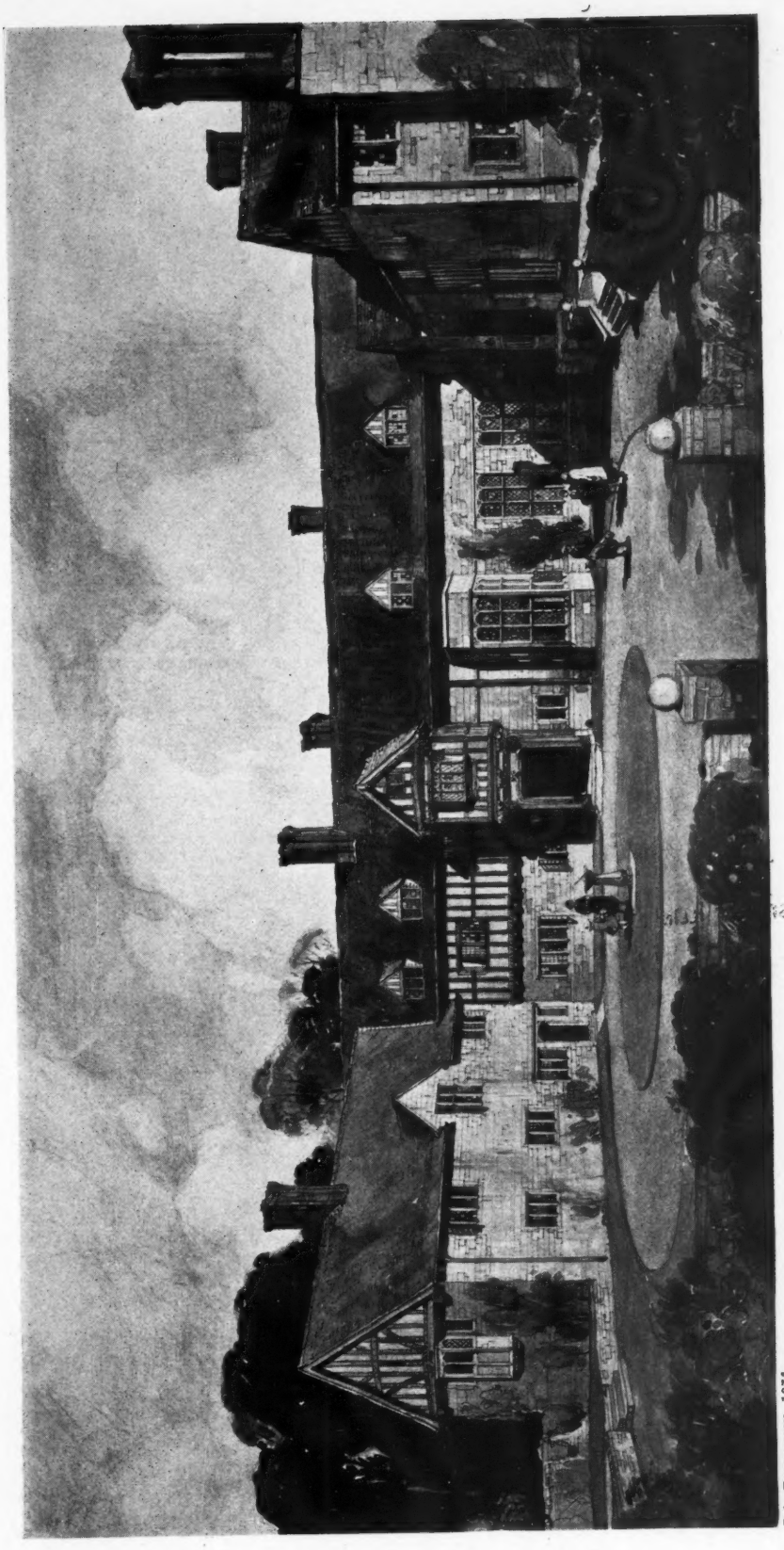

THE "HOMESTALL," SUSSEX.

MR. E. GUY DAWBER, A.R.A., P.P.R.I.B.A., Architect.

R.A. Exhibition, 1934.

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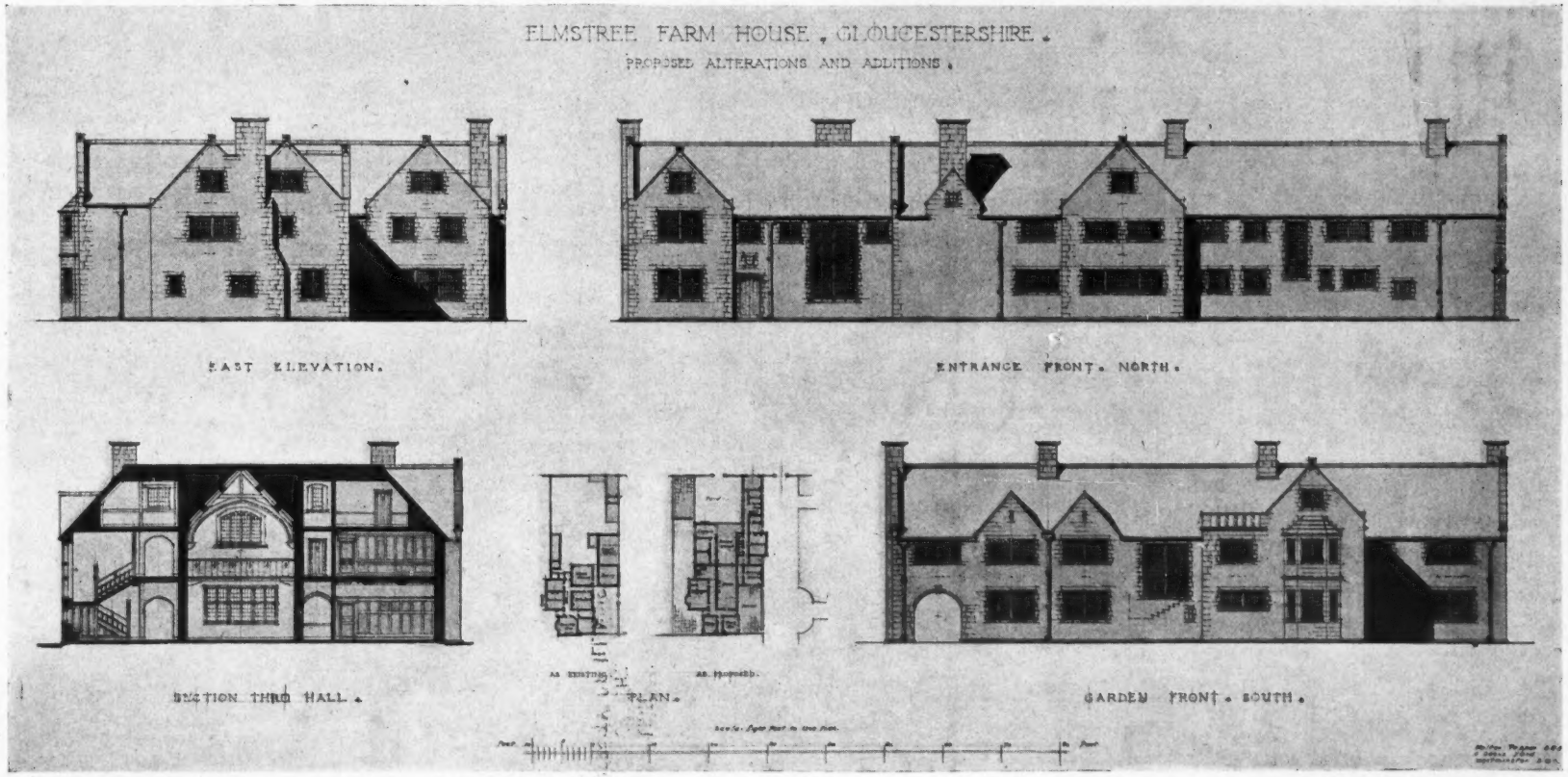

R.A. Exhibition, 1934.

ELMSTREE FARMHOUSE, GLOUCESTERSHIRE: Proposed Alterations and Additions.

MR. WALTER TAPPER, A.R.A., P.P.R.I.B.A., Architect.

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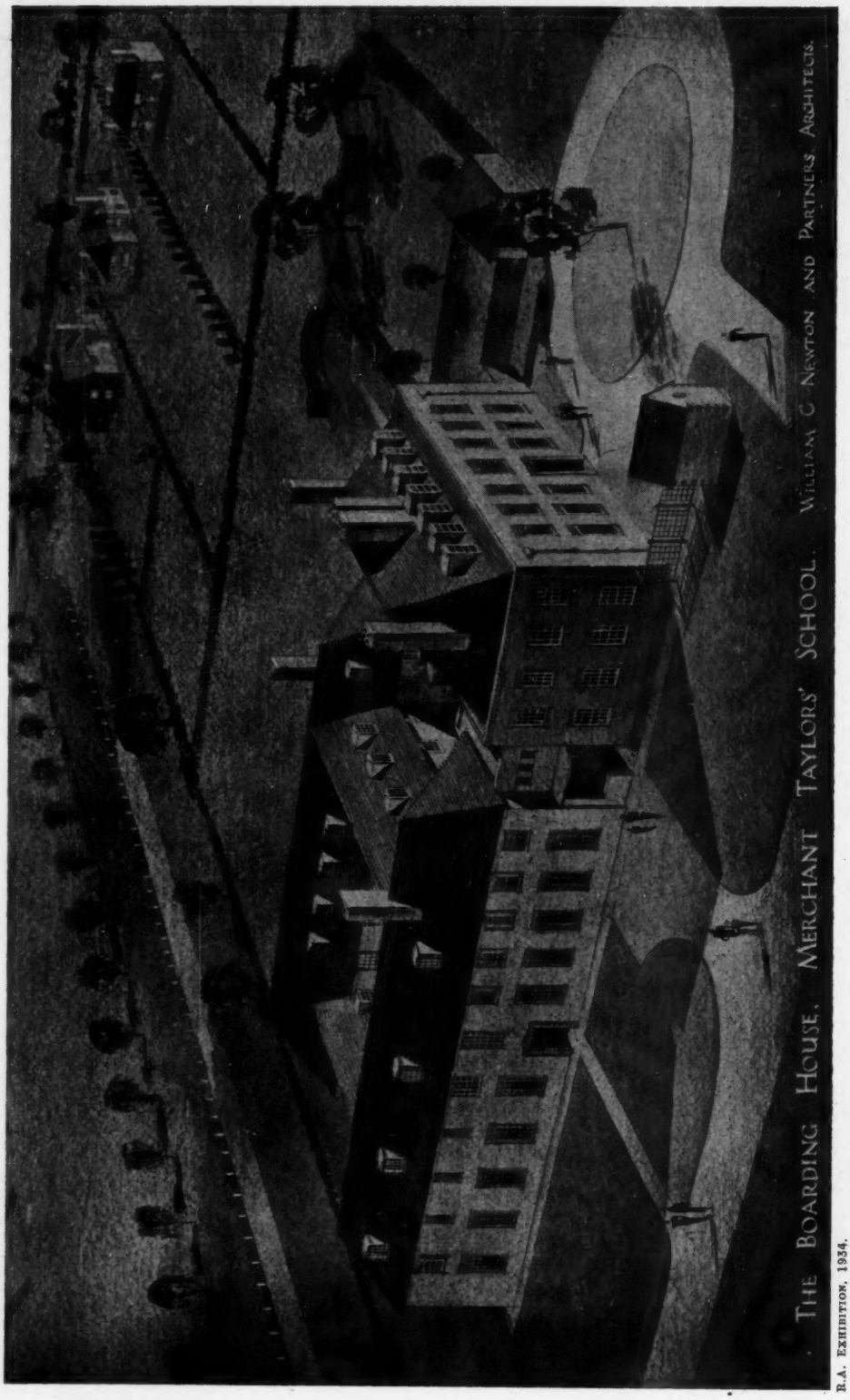
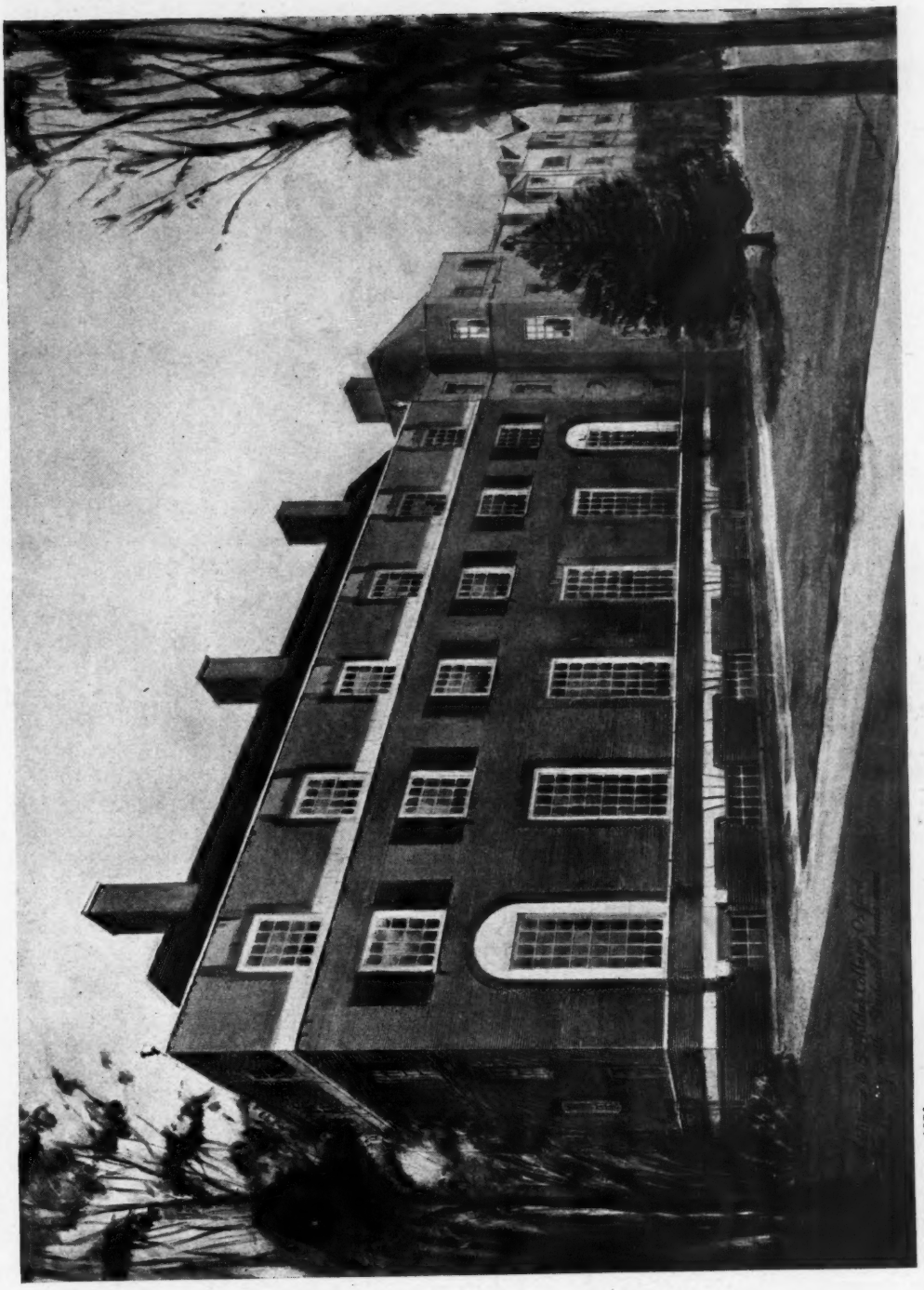
SWANSEA CIVIC CENTRE : The Great Hall (to house panels by Mr. Frank Brangwyn, R.A.)
MR. PERCY THOMAS, F.R.I.B.A., Architect.

R.A. Exhibition, 1934.



THE BOARDING HOUSE, MERCHANT TAYLORS' SCHOOL. WILLIAM G NEWTON AND PARTNERS, ARCHITECTS.

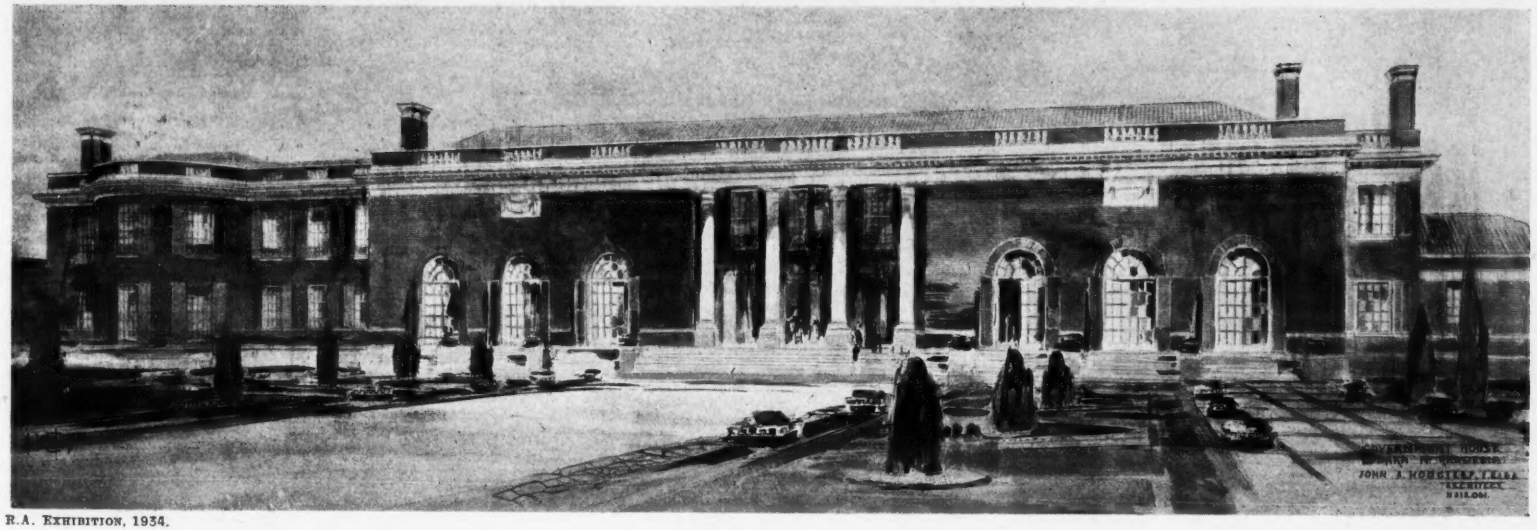
R.A. EXHIBITION, 1934.



R.A. Exhibition, 1934.

ADDITIONS TO ST. HILDA'S COLLEGE, OXFORD: New Library with Students' Rooms over.
SIR EDWIN COOPER, A.R.A., Architect.

ENTRANCE FRONT.

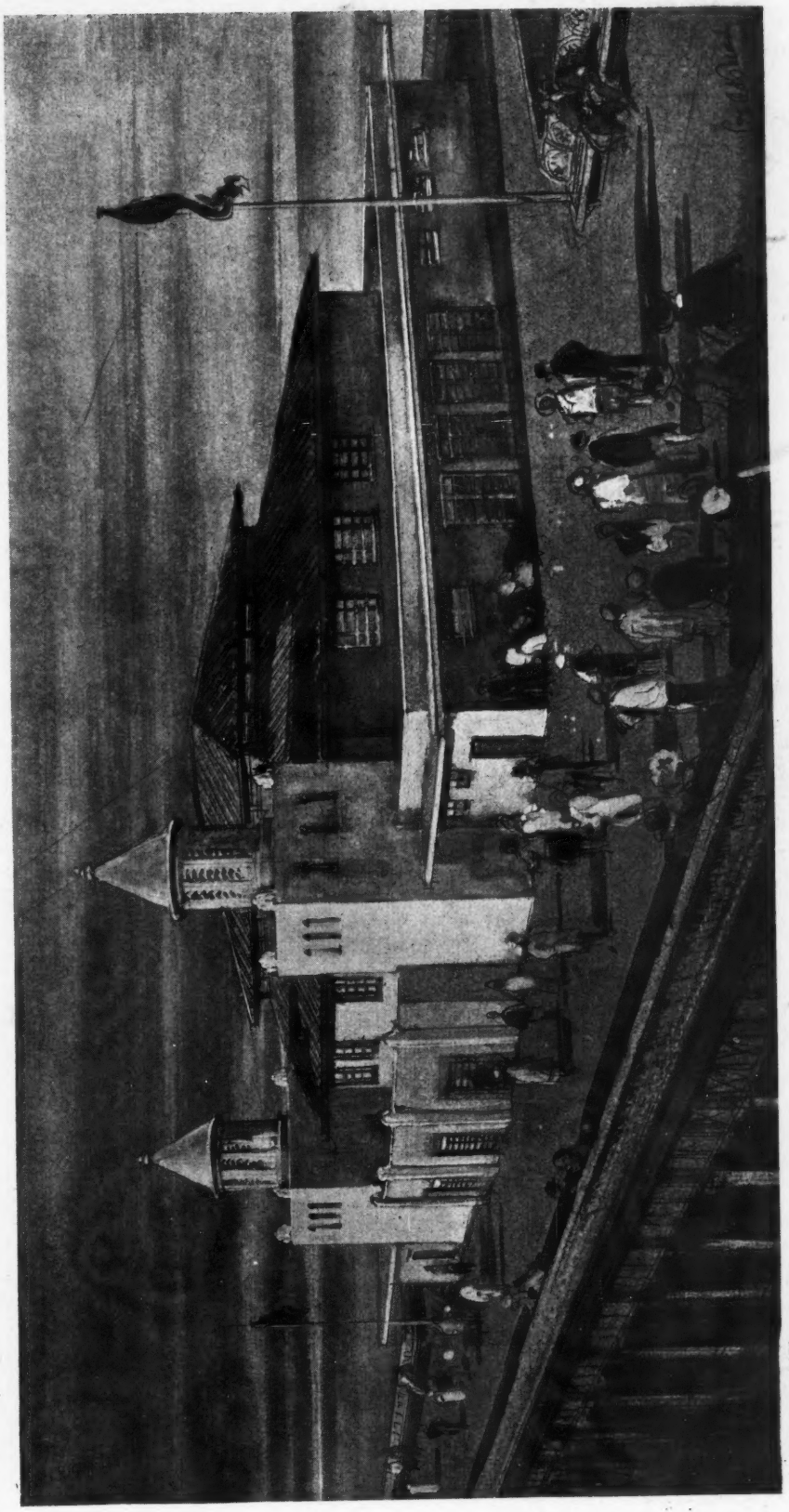


R.A. EXHIBITION, 1934.

GARDEN FRONT.

GOVERNMENT HOUSE, LUSAKA, NEW CAPITAL OF NORTHERN RHODESIA.

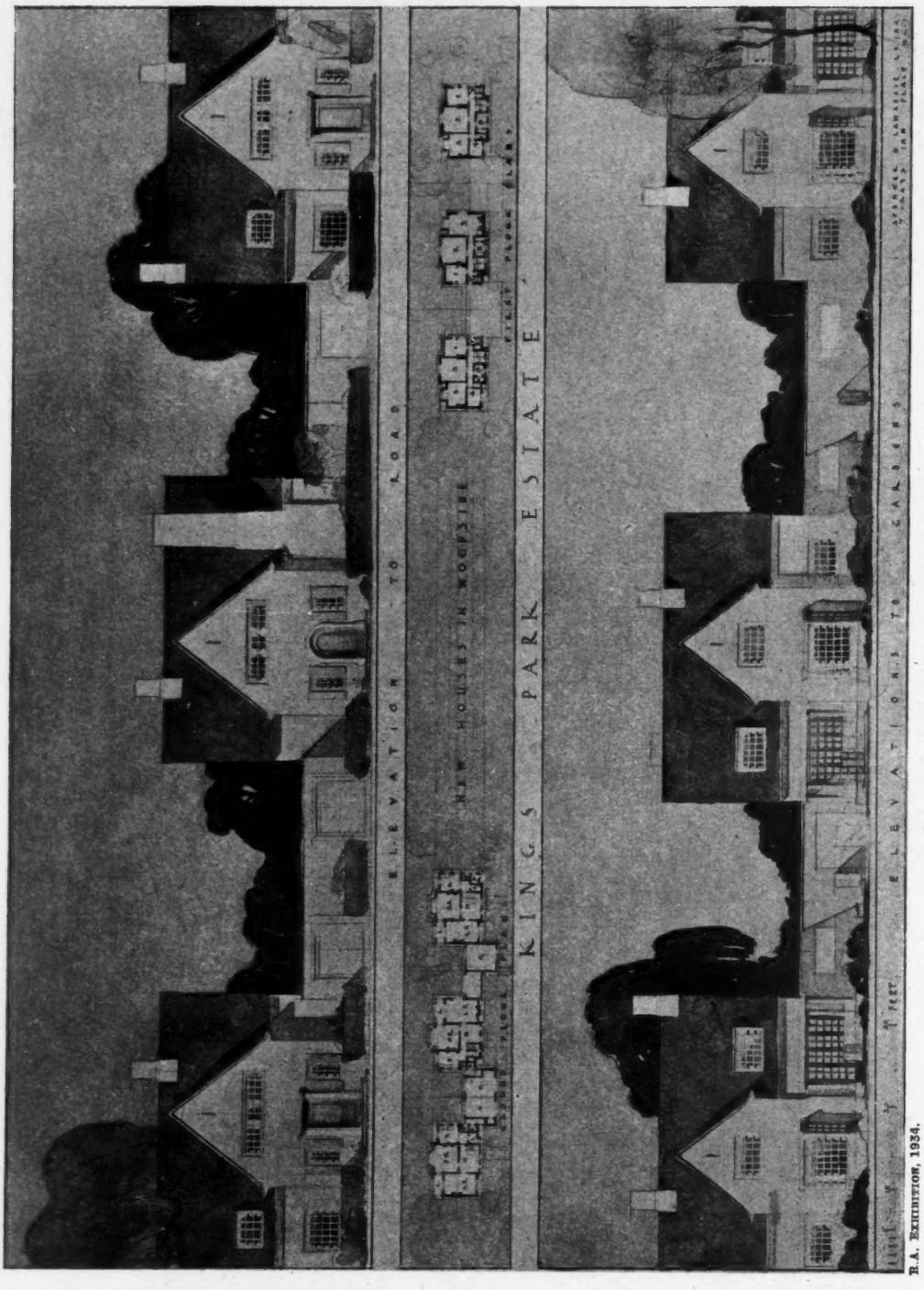
MR. JOHN A. HOOGTERP, F.R.I.B.A., Architect.



PIER PAVILION, COLWYN BAY.

PROFESSOR STANLEY D. ADSHEAD, F.R.I.B.A., Architect.

R.A. Exhibition, 1934.



HOUSES, KING'S PARK ESTATE, LYMINGTON, HANTS.

MR. SPENCER H. LAWRENCE, L.R.I.B.A., Architect.

R.A. Exhibition, 1934.

STEEL-FRAMED BUILDINGS RESEARCH

THE Department of Scientific and Industrial Research has just issued the second report* of the Steel Structures Research Committee, which is inquiring into the design of steel-framed buildings. The work is being carried out in co-operation with the British Steelwork Association, who are taking a far-sighted view in devoting money and energy to a complete study of the fundamental principles and practice of steelwork design. The report reviews the work done by the committee from April 1, 1931.

"It was recognised at the outset," the report states, "that the investigations involved would be complicated and laborious, and that spectacular developments could hardly be expected at an early date. Nevertheless, much ground has been gained. The committee's experimental work has emphasised the empirical nature of present design methods. As no criticism has ever been levelled at the safety of existing steel buildings, it is logical to deduce that such empirical methods leave room for considerable economy in material, and we have reason to believe that, as a result of the mathematical and experimental investigations, it will be possible to make suggestions for considerable improvement in efficiency of design." How great the improvement may be is indicated by the fact, revealed in the report, that the putting in force of the committee's recommendations for a new code of practice, drawn up in 1932, which was based on a survey of the then existing knowledge, "has led to a reduction amounting to as much as 20 per cent. in the cost of steelwork required for the kind of buildings to which it mainly relates."

Experimental and Theoretical Work.

The report indicates that the committee fully realises that the results of its researches, to be of real value, must be expressed in a form suited for ordinary practice. This practical end has not yet been reached, but real progress has been made and this objective seems within sight. In seeking it, it has been necessary to carry out a complete mathematical analysis of the distribution of the actual forces set up in a steel frame when under load, and to check the resulting formulæ obtained against actual experimental results. Experimental data have been collected, and are summarised in the present report, from observations made on the full scale steel frame at the Building Research Station, while Dr. Oscar Faber discusses the results of measurements carried out for the committee on the framework of the new Museum of Practical Geology at South Kensington, both before and after the steel was encased and the floors loaded. Arrangements have also been made, the report states, for corresponding measurements to be taken on the framework of a new London hotel.

The mathematical methods developed for the analysis of the experimental data are dealt with at length by Professor Batho, of Birmingham University, Dr. J. F. Baker, of Bristol University, and others. Professor Batho is also investigating the action of various types of beam and stanchion connections.

The Problem Reviewed.

The full-scale tests on steel frames have drawn attention to several points not taken into account in present-day design. The loading of the horizontal beams of a steel-framed building transmits through the connections to the steel uprights forces tending to make these uprights bend. Experiments have shown that the lighter or weaker the connections, the smaller are these bending forces. For example, a usual method for connecting the vertical columns or uprights and horizontal beams is by metal angle irons (cleats) bolted above and below the horizontal beam. If the top angle irons are removed, leaving a weak connection, the bending forces are very much reduced. On the other hand, if the load is applied horizontally, as in the case of wind pressure, the removal of the top connection increases the bending forces at the encased feet of the uprights as much as three times. Thus, if vertical loads had only to be considered, economies could be made in the columns by making the connections light. When, however, both vertical floor loads and horizontal wind pressures have to be resisted, it is clear that two opposite conditions have to be met in any attempt to realise economies. Two ways of advance are open, but it is too soon to say which is likely to give better results. Either the steel frame can be made to withstand all loads by increasing the rigidity of the connections, or, by strengthening the walls or introducing diagonal bracings, the beams can be relieved of the duty of preventing movements due to wind pressure.

Bolts: Welding: Wind Pressure.

In addition to making a careful study of the different types of riveted connections, the problems involved in the use of bolts are being investigated. Tests have been made of the forces tending to cause the bolts to slip under tightening, of the importance of the quality of the steel in the bolts, and so on.

Besides its main line of work, the Committee is considering other problems, including the electric arc welding of steel-frame structures and wind pressure on buildings. The main feature of the research on welding is a statistical investigation of the strength of welds made under ordinary commercial conditions. This is being conducted with the co-operation and the financial support of a number of welding firms, and consists of extensive tests of specimen welds prepared by workmen of a certain minimum standard of proficiency using normal electric arc welding plant. Non-destructive methods of testing and the best form for welded joints are also being dealt with.

The work on wind pressure which is being carried out by the staff of the National Physical Laboratory is being supervised by the Building Research Board, and aims at discovering by experiments on models in wind tunnels what shielding effect from wind pressure is given to a particular building by a built-up area. Since the horizontal forces due to wind pressure are the major complicating factor in a simplified design of steel-frame buildings, the results are awaited with interest.

* Published by H.M. Stationery Office. Price 7s. 6d. net.

"THE BUILDER" DEBATE

LXXIV.—THE MODERN ROOF.

"That the roof of the future for domestic buildings will not be flat."

SIR,—The recent Ideal Home Exhibition, the illustrations in the art and technical papers, and even the conservative summer exhibition at the Royal Academy suggest that some architects of to-day are under the misapprehension that a flat roof makes an up-to-date house. The reasoning behind such an assumption is difficult to follow, and there is more than a suspicion that the impatient designer who adopts the flat roof has no more in his mind than a desire to be out of the ordinary, and finds a crude outline a short cut to this self-imposed aim. I do not propose to analyse the mental attitude of such a designer, but merely to expose the fallacies under which he seeks to cover his irresponsibilities with a thin garment of reason.

The first argument which is generally used to support the flat roof is that it forms an ideal promenade, or sun-bathing place, for a domestic building. In examining this claim we have to consider two types at least of building: that standing alone in its own grounds, and that standing in a row of small plots. In the latter case, it is obvious that the average British householder is not likely either to promenade or sun-bathe within a few feet of his neighbours' observation, and that he can do either with probably greater privacy in his own little back garden. We can therefore exclude that argument from one section of houses under consideration. With the house standing in its own grounds, there are very few instances where either better views or more sunlight can be obtained from a roof-top than from the open garden, and it is indeed seldom that we see these wonderful roof gardens in actual use. There is, in fact, very little of reason in the idea.

The next argument is that it is cheap. Cheapness is a relative term, and if costs are compared with a house where full use is made of roof space and low eaves, it will be found that the flat roof commits the building to a good many items of expense before the actual covering is compared. For instance, take the case of a house where the bedrooms are partly in a roof, with vertical ashlaring five feet high. To convert this to a flat roof the walls must be raised not merely three feet to reach an eight-foot ceiling, but at least two more, to form a coping and flashing, and at least a further two feet beyond this if a protective parapet is to be formed to make the flat roof available for use. Add this to the cost of flashings and it will be seen that there is a great deal of expensive work to be done before it becomes a bare comparison between squarage of tiling and yardage of asphalt. So we see that two main arguments fall to the ground on their own showing.

But let us turn to the advantages of the timber and tile roof. The form of the tile roof developed before there were such things as water tanks, electric wires and conduits, and even the crying need for storage space. It arose as the natural way of casting off water and snow in this mixed climate of ours, and from that point of view alone has still much to commend it. But when, by the accident of event, we have at our disposal not only a useful access loft, where pipes, tanks and conduits may be run, out of sight of the formal quarters of the house, but still permanently accessible, we are surely foolish to create unnecessary problems by throwing aside the conveniences that have arisen so naturally. The flat roof offers none of these amenities, and the smutty promenade it offers in exchange is surely a poor bargain. Finally, the air space of a roof which is properly beam filled and cheaply felted offers an insulating layer which is of real value to the comfort of a dwelling. Similar insulated properties can only be applied to a flat roof by relatively expensive means.

These are not just excuses with which to bolster up a desire to maintain traditional form, but are really practical influences which the most "functional" of designers must surely bear in mind. The flat-roofed house looks, and is, something unnatural in building, and our eyes are not leading us astray when we feel that this is the case. There will always be some who delight in making a sensation, and probably we shall have to suffer their eccentricities until sufficient have copied their ways to make them appear just dull and ordinary ugliness.

POSITIVE.

Preservation of Waterloo Bridge.

The Society for the Protection of Ancient Buildings and the London Society jointly have issued, under the advice of a specially convened committee, a statement summarising the reasons for retaining Waterloo Bridge by strengthening it. It is contended that the sinking of some piers has been due to river scour washing out gravel, for which the Embankment and dredging are responsible; that the stone and timber are sound; that all the piers can, for about £660,000, be underpinned with little more hindrance to navigation than to-day; that until navigation was confined to two arches no accident had been recorded; that two arches can be rebuilt while allowing one line of road traffic to pass; that the temporary bridge can be removed after three and a half years; that more than four lines of traffic are useless in view of the Strand crossing; and that the true and urgent need for the near future is a bridge at Charing Cross.

MATERNITY AND CHILDREN'S HOSPITALS

A PAPER on this subject was read by Mr. A. Saxon Snell, F.R.I.B.A., at a sessional meeting of the Royal Sanitary Institute, held at Central Middlesex County Hospital on March 10. The lecturer said he proposed to deal with special hospitals for maternity cases and children. To curtail the subject even more, he was confining himself to ward units, because that was where the main difference lay between general and special hospitals. The administration offices, residents' quarters, etc., were much the same in all types of hospitals.

The large general hospital of our forefathers generally treated all cases in more or less similar ward units, though the dangers of including infectious diseases, at least, within the buildings, were early recognised, and special fever hospitals were provided. Tubercular and maternity cases and children had, however, continued to be treated in general hospitals, often, though not always, in separate wards. Nevertheless, hospitals were established even for those cases in quite early times.

For the purposes of comparison, it was desirable in the first place to remind them of the arrangement of ward units in a general hospital. The hospital in which they were assembled, was designed and built over thirty years ago. He thought it was fairly typical, and perhaps a little in advance of the period. They would note that the axis of the wards ran north and south, which was adopted to ensure that both sides of the ward received direct sunshine—the east in the morning, and the west in the afternoon. Then it was the custom to place the sanitary offices (which were separated from the ward by a cross-ventilated lobby) in towers at the lower end of the wards. This position had the disadvantage of cutting off a considerable amount of valuable sunlight from the wards, and so in later years they placed the towers at the upper end of the ward. Within the last few years they had done away with projecting towers and had incorporated the sanitary offices within the general line of the wards and adjoining rooms. They were, or should be, entered from a ventilated, though not necessarily cross-ventilated, lobby. Note, too, the number of beds in the large ward, in that case twenty-two. The older type often had as many as thirty. The inconvenience of so large a number had been minimised in late years by dividing the ward transversely with two or more glazed partitions, and he might add that it was remarkable how little this affected visibility to all parts.

Fig. 1 was that of a new ward block erected at Hillingdon, Middlesex. In that case the sanitary offices were incorporated within the general lines of the block, and as they were eight feet only in height it had been possible to obtain ceiling ventilation. There were only twenty-four beds in the long ward, and these were divided into two sections by means of the glazed partition.

Fig. 2 was the plan of a ward block at the Southend Hospital designed by the late H. Percy Adams, which was kindly supplied to him (the lecturer) by Mr. Pearson. They would note that the beds were placed parallel with the main walls. The object of this was to avoid the distressing effect upon the patient of having to face a window whilst lying in bed. It had yet to be determined whether, even so, the older position was not to be preferred for other important reasons. Some very drastic new ideas upon the subject were now being canvassed, and probably some of them would be adopted generally in due course. Finally, he would remind them of the wide open-air balconies which were placed generally along the west wall, for the advantage of open-air treatment when weather permitted. Wide balconies on the south end of the ward (which could be closed in) were more restricted in area, but they interfered very little with the lighting of the ward. At Hillingdon (Fig. 1) the block was on an east and west axis, and they provided such a balcony along a part only of the south wall, and it could be entirely enclosed in glass for bad weather.

Maternity Wards.

In the hope of acquiring information likely to be useful in dealing with the subject of maternity wards, he looked through the papers read upon the subject last year at the Blackpool Congress. Beyond united praise of the organisation initiated in Willesden by their Chairman, Dr. Buchan, he found little which he, as a mere man and a layman at that, could understand or appreciate. It was interesting to see that opinion appeared to be divided as to the superiority of a hospital compared with the home for childbirth. He had, of course, no opinion of any value to offer, but when he thought of the awful conditions and surroundings in slum dwellings it did appear to him that a properly designed hospital was better. He was, however, concerned only with the particular arrangements required in these hospitals.

The first necessity appeared to be the guarding against the menace of infection, more especially the dreaded puerperal fever. As he understood, one case in a ward was likely, if not certain, to spread to the other patients very rapidly. It was interesting to find that the danger was recognised and provided for as long ago as 1853 in the building of the Lariboisière Hospital in Paris. Maternity cases were treated in one of the ordinary ward units set aside for the purpose; but a special block was provided for isolation, more especially for puerperal fever cases.

The first comparatively modern plan was that of the City of London Lying-in Hospital, designed by Messrs. H. H. and M. E. Collins. It was built as long ago as 1904, and to his mind was a remarkable design which showed how, even at that time, the special needs of a maternity hospital were recognised and provided for. Every ward was cut off from the main building by a cross-ventilated lobby. Nowadays such lobbies were seldom seen, and frankly he did not think they were necessary. There were in all eight separate wards, each for six beds, and he believed that it was intended at the time that one at least of these should always be kept empty and ready for transference of patients from any ward in which infection might develop.

Fig. 3 was that of the modern block for the famous old Queen Charlotte's Maternity Hospital. It was designed by Mr. Stanley Hall and was, he thought they would agree, a model of its kind. There were two main wards, each with five beds, and five separate rooms, each for one bed, and these were separated one from the other by glazed partitions. The labour-room was well arranged, and had, as adjuncts, anæthetising and recovery-rooms. Note the wide open-air balcony adjoining the wards.

Children's Hospitals.

The necessity of separate hospitals or ward units, at least for children, had long been agreed. Apart from other considerations, children were less restrained than adults in voicing discomfort and suffering, and were more noisy in convalescence, and therefore likely to be a disturbing element in a general ward. Then, too, they took and distributed infection very quickly. In modern hospitals for children no more than six to ten were placed in one ward, and it was well to provide an unusually large number of single bed wards.

The sanitary offices in children's wards should have, besides w.c.s with low seats, a small common room or space for chambers, for use by tiny children. This should not be closed in. In the bathroom there must be one or more small baths or bath tubs. Low level wash-basins were desirable. He need scarcely add that direct sunlight was even more important for children than for adults; and it was scarcely less important that all the beds should be under constant and easy supervision. High tiled dadoes, with inset pictures where possible, were desirable, if only because children would, if left with pen or pencil, use plastered walls as drawing-boards.

Manchester Babies' Hospital Plan (Fig. 4), designed by Messrs. Cruickshank and Seward, appeared to be an excellent plan for a small hospital. Note the sun-room, and that all the wards faced due south, and that the fronts were practically all of glass. Note also the large milk-room and sterilising-room for feeding bottles. The corridor at the back of the wards was lower, so as to allow of windows high up in the north walls, and through ventilation. There did not appear to be provision for constant supervision, unless the small wards were used by the staff in charge.

Fig. 5 showed the plan of the special ward block for children lately erected in the Central Middlesex County Hospital. It was in the form of an inverted T, three stories in height. The main wards (six in number) faced due south. These wards were each for twelve

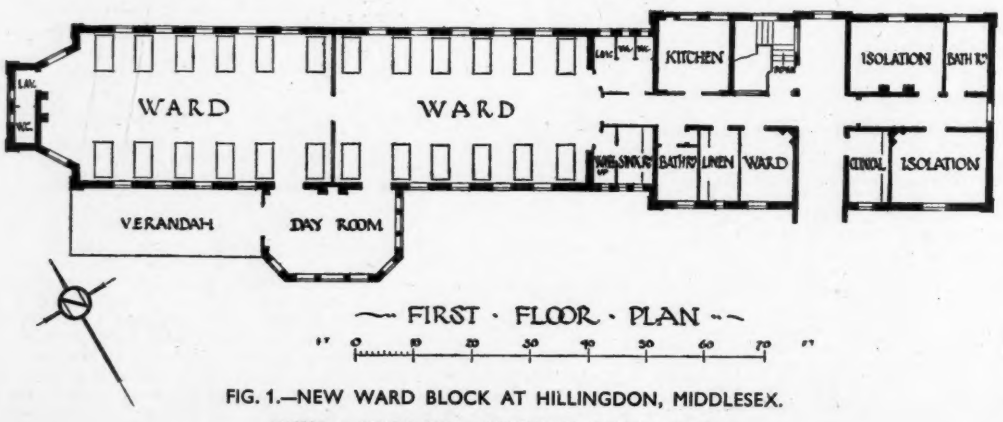


FIG. 1.—NEW WARD BLOCK AT HILLINGDON, MIDDLESEX.

MESSRS. A. SAXON SNELL AND PHILLIPS, FF.R.I.B.A., Architects.

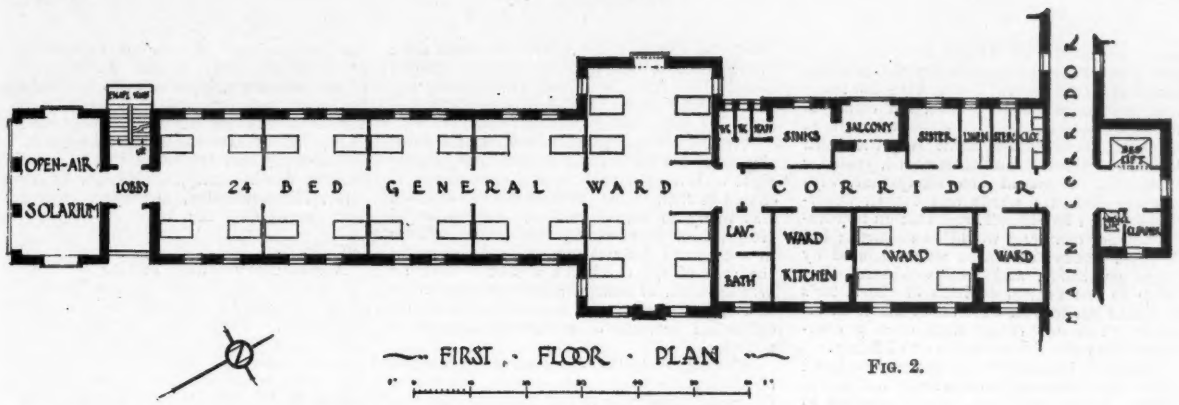


FIG. 2.

FIG. 2.—WARD BLOCK, SOUTHEND GENERAL HOSPITAL.

MESSRS. ADAMS, HOLDEN AND PEARSON, FF.R.I.B.A., Architects.

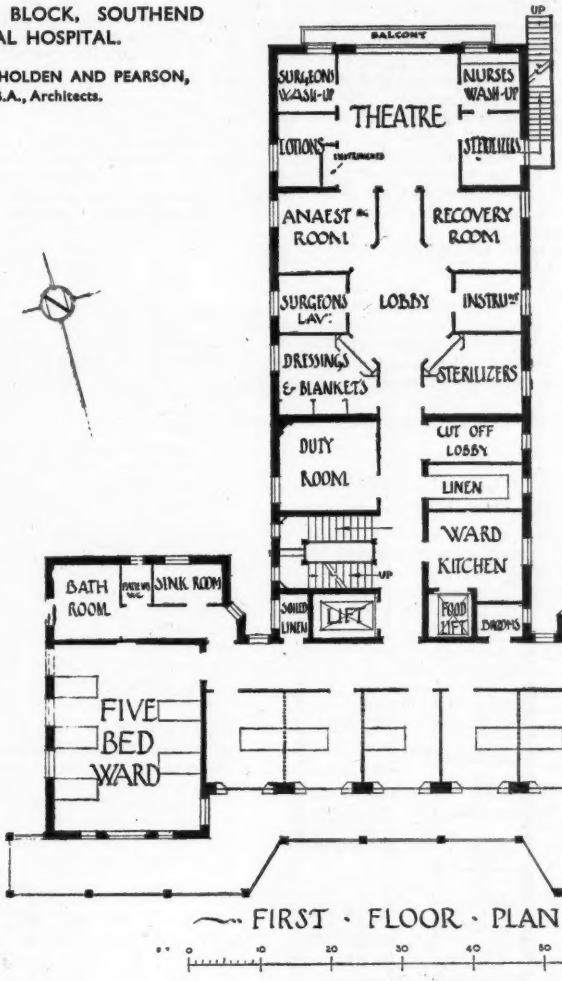


FIG. 3 (centre).—QUEEN CHARLOTTE'S MATERNITY HOSPITAL: Isolation Block.

MR. E. STANLEY HALL, F.R.I.B.A., Architect.

FIG. 3.

FIG. 4 (below).—MANCHESTER BABIES' HOSPITAL, BURNAGE.

MESSRS. CRUIKSHANK AND SEWARD, FF.R.I.B.A., Architects.

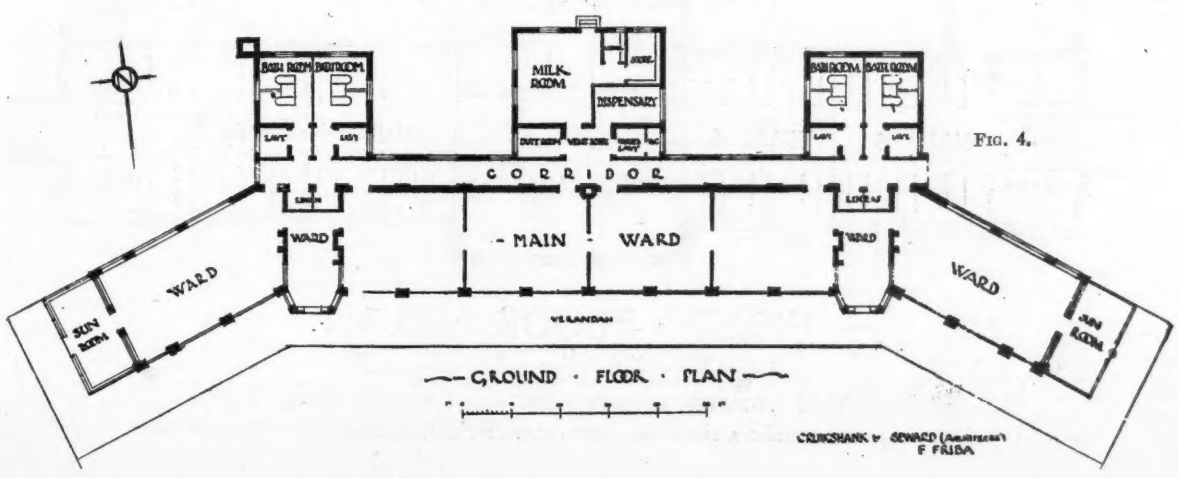


FIG. 4.

beds, but each was divided into two by a glazed partition. The sanitary annexe was common to the two. There were no fewer than twenty-four single rooms, but owing to the constricted nature of the site very few of them had direct south light. On the third floor there were special side wards, each for three beds. It would seem likely that, with so many separate wards and rooms, supervision should be difficult, and that an inordinate number of nurses would be required; but all those wards and rooms were enclosed by glazed partitions, and they would see that owing to the central position of the sister's room and kitchen, all were under direct observation. The day rooms were equally overlooked from the sister's room and kitchen.

The whole building had a flat roof enclosed by low parapets and glazed screens, and as the lift was carried right up, it was possible to bring the beds up to that level. The lower end of the roof space was roofed in, and had a movable glazed front. As this could, in suitable weather, be used as a ward, conveniences and a bath, etc., were attached.

Attached to the sanitary annexes were open balconies (protected by glazed screens) for the disposition and temporary storage of soiled linen, etc. From this, a hand-power lift took the linen direct to the ground level, without passing through the building. There was a room adjoining the staircase on the ground floor for feed preparation and bottle-washing.

The building as a whole was a steel-framed structure encased in brickwork, and the whole of the floors were of solid reinforced concrete. It was therefore fire-resisting throughout, and special staircases were provided at each end for escape in case of necessity.

Replying to points raised in the discussion, the lecturer said that the question of the right orientation of ward blocks was one as to which there was some difference of opinion of late years. He could not deny that wards running east and west, i.e., with one side facing due south, were, on sunny days at least, more cheerful on the whole; but it was obvious that the beds on the north side did not get the benefit of the sun rays. For the most even distribution of sunlight there could be no doubt that the north and south axis was better. The Building Research Station had definitely pronounced in its favour.

With regard to a preference for a number of single-bedded wards, this was certainly in the right direction, if only for the opportunity it offered of segregating patients whose condition was likely to distress others. In the Royal Hospital for Freemasons, the number of beds in each ward did not exceed four, except in the case of the children's wards. Such an arrangement, of course, added greatly to the cost of the hospital, and it would no doubt require the services of a greater number of nurses.

With regard to the objection to the practice of placing the sanitary annexes at the end of the main ward, the lecturer agreed that the old position, i.e., at the lower end of the ward, was inconvenient; and they were not easily kept under observation by the nurses. Placed at the upper end (as at Hillingdon) they were free from that objection, and were available for the separation wards. He did not like placing them in the centre of the north wall of the main ward.

[We are able to reproduce the foregoing report and the accompanying plans by courtesy of the lecturer and the Royal Sanitary Institute.]

NEW PUBLIC WORKS

Bootle.

Structural alterations are proposed at Central Police Station, Oriel-road. Tenders (deposit £1) are returnable by May 29.

Brownhills.

The U.D.C. invite tenders (upon deposit of £1) for the erection of 76 houses on various sites. The tenders must be returned by May 24.

Coventry.

Warwickshire and Coventry Joint Committee for Tuberculosis, in connection with the extensions at the Sanatorium, has accepted the tender of Mr. W. W. Webster, of Guilsborough, Northampton, in respect of building services, of £14,706 10s.; the tender of Messrs. Seymour, Sweet and Co., Ltd., of Water-street, Birmingham, for engineering services, of £974 1s.; and the tender, conditionally, of Messrs. B. French, Ltd., Kidderminster, in respect of electrical services, of £827 10s. 4d.

Droitwich.

A missionary college costing £20,000 is to be built by the Fathers of the Divine Word of St. Richard's Mission House, Hadzor, Droitwich. Plans have already been prepared, and the site is being cleared by local labour under the direction of the Fathers. The main work will be carried out by contract.

Durham.

The Ministry of Health has sanctioned the erection of 100 more dwelling-houses on the Sherburn-road site, and tenders are to be sought in due course for the work by the Durham Corporation.

Essex.

The estimates presented to the Essex County Council on Tuesday included a provision of £159,120 for education. Principal items are: Provision of a swimming-bath and plant at the proposed technical college, South-east Essex, £4,400; proposed secondary school, Dagenham, £51,443; enlargement of Dagenham (Rush Green) School, £7,930; proposed council senior school, Chipping Ongar, £21,596; proposed council senior school, £22,444; an adaptation of Hornchurch (Park-lane) School, £5,408. The County Architect is Mr. Jno. Stuart, F.R.I.B.A., Chelmsford.

Leatherhead.

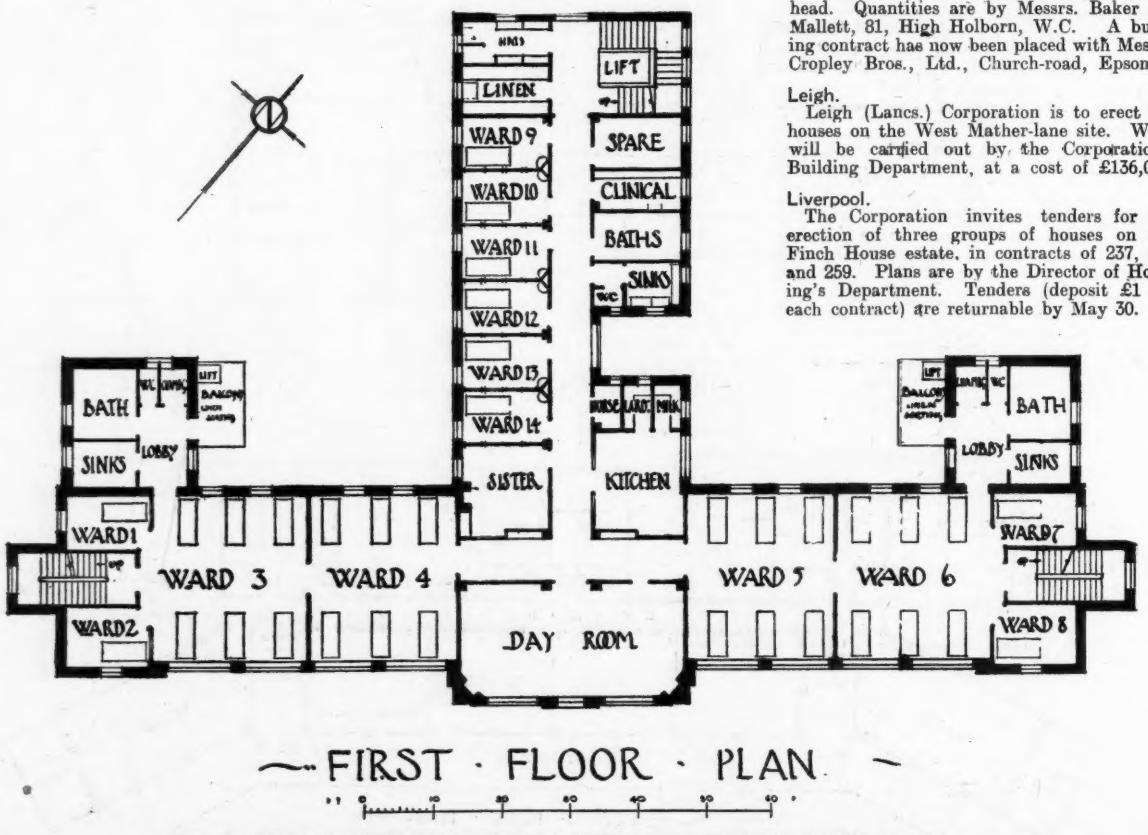
Plans for Council offices on the Kingston House site have been prepared by Mr. C. H. Rose, The Croft, St. Nicholas-hill, Leatherhead, in conjunction with Mr. H. R. Gardner, "Littlecourt," St. Mary's-road, Leatherhead. Quantities are by Messrs. Baker and Mallett, 81, High Holborn, W.C. A building contract has now been placed with Messrs. Cropley Bros., Ltd., Church-road, Epsom.

Leigh.

Leigh (Lancs.) Corporation is to erect 401 houses on the West Mather-lane site. Work will be carried out by the Corporation's Building Department, at a cost of £136,027.

Liverpool.

The Corporation invites tenders for the erection of three groups of houses on the Finch House estate, in contracts of 237, 241 and 259. Plans are by the Director of Housing's Department. Tenders (deposit £1 1s. each contract) are returnable by May 30.



FIRST · FLOOR · PLAN

FIG. 5.—CENTRAL MIDDLESEX COUNTY HOSPITAL: CHILDREN'S WARD BLOCK.

MESSRS. A. SAXON SNELL AND PHILLIPS, FF.R.I.B.A., Architects.

Prudhoe-on-Tyne.

The North-Eastern Joint Board for the Care of the Mentally Defective has accepted the tender of Henderson Brothers, South Shields, at £13,223 10s. 4d., for the erection of a new hospital at the Prudhoe Hall Colony. The architects are Messrs. J. H. Morton and Sons, Martins Bank-chambers, Fowler-street, South Shields.

Rushden.

Tenders have been received by the T.C. for the erection of a further 66 houses on the Highfield-road as follows:—Messrs. J. W. Williamson and Sons, Ltd., Peterborough, for 54 houses, £15,598, and Messrs. W. Thompson and Sons, Ltd., Irthlingborough, for 12 houses, £3,384.

Scarborough.

Fifty-eight houses on the Prospect Mount estate are proposed by the Corporation, to plans by the Borough and Water Engineer's office. Tenders (deposit £2 2s.) are invited, returnable by May 28.

Skegness.

Skegness Foreshore Committee has instructed the Surveyor to prepare the contract and detailed drawings of a £13,000 development and sea defence scheme, a loan for which has been sanctioned by the Ministry of Health. Tenders are to be invited for the work as soon as the preliminary details are settled.

Tipperary.

The North Tipperary Co. Board of Health has accepted the tender of Mr. S. Philips, Ormond-road, Drumcondra, Dublin, for the erection of a new hospital for Nenagh, at £46,853.

Wandsworth.

Wandsworth B.C. invite tenders for the demolition of properties on the site of the proposed new municipal buildings. Particulars are obtainable from the architect, Mr. Edward A. Hunt, F.R.I.B.A., Brettenham House, Lancaster-place, W.C.2, upon deposit of £2 2s. Tenders are returnable by May 31.

THE WEEK IN PARLIAMENT

The Building Society Guarantee.

Mr. Shakespeare, in reply to Mr. Liddall, said that up to March 31, 1934, guarantees had been given under Section 2 of the Act of 1933, in respect of 1,631 houses. In addition, guarantees in respect of 8,400 houses had either been promised or were the subject of active negotiations with the local authorities. Up to the same date 17,569 houses had been completed under the Housing Act, 1930, for the purpose of rehousing persons displaced under the provisions of the Act. In addition, 14,201 houses were provided up to March 31, 1934, to rehouse persons displaced under improvement and reconstruction schemes prior to the Act of 1930.

Slum Clearance.

Mr. Temple Morris asked the Minister of Health if he possessed any statistics showing the number of tenant-owners of houses in slum-clearance areas who had been deprived both of their home and their living without compensation; and whether he could take steps to ensure sympathetic treatment of these cases.

Sir Hilton Young said he did not. The question for consideration in assessing compensation was the condition of the house so that no distinction could be drawn between tenant-owners and other owners of houses in slum-clearance areas. Local authorities had, however, power under Section 41 of the Housing Act, 1930, to pay allowances towards expenses of removal or loss resulting from disturbance of trade or business, and he had already brought this section to their express notice.

Private Enterprise.

Mr. Bossom asked the Minister of Health if he could state how many of the 170,000 houses which had been built by private enterprise last year were for rent and how many for sale; and how many of these were capable of being rented at an all-in rent, including rates, of 10s. or less per week, as essential for the use of the lowest paid workers.

Sir Hilton Young said that assuming the proportions shown in the returns for the second six months of the year to hold good, about 40,000 of the 208,000 houses erected by private enterprise without State assistance in the year ended March 31, 1934, were occupied by persons other than their owners, and about 77,000 were of a rateable value not exceeding £13 (£20 in Greater London).

Architects' Registration.

Lord Crawford has introduced, in the House of Lords, a Bill to amend the Architects' Registration Act. The Bill has been read a first time.

INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

We do not undertake to reply to inquiries concerning proprietary materials.—Ed.

QUESTIONS.

Beetles: Method of Destroying.

Sir,—If any of your readers can tell me of an infallible method of destroying beetles they would be doing me a very great service. A bakehouse was until quite recently near to a lot of houses, and it is thought that, as this is now closed, any beetles which were there are attacking the houses. They are very numerous, and the many powders on the market seem to have very little effect in reducing their numbers. The ground floors are of wood, surface areas are all concreted, with plenty of space, and air bricks all round. These air bricks are suspected of being means of entry. I am tempted to take out all the wood floors, if by filling and concreting and composition floors I can cure it. But surely there is a cheaper way which does not seriously interfere with the tenants. I really am, and sign myself, Very Anxious.

[The method of spraying a number of times at intervals under the floors and along the skirting with a strong solution of formalin or other good insecticide has been successful. The opinions of readers would be valuable.—Ed.]

Slum Clearance.

Sir,—I shall be extremely grateful if you will give some particulars of slum clearance schemes. In particular, when a local authority makes a clearance or compulsory purchase order, what provision is made for housing the tenants in the area while the area is being cleared. R. T.

[We recommend our correspondent to get into touch with the "New Homes for Old" Exhibition, Building Centre Cottages, Bush House, Aldwych, W.C.2. In regard to the latter part of the question, a local authority must provide alternative accommodation before demolishing a clearance area.—Ed.]

Steelwork: Protection from Corrosion.

Sir,—How may steelwork best be protected from abrasion and corrosion? Some engineering structures under my control are showing definite signs of wear under the weather and I wish to check this. Works Manager.

[This query has been submitted to a technical correspondent, who writes as follows:—

Steelwork can be effectively protected by a spray coat of concrete. Liquid concrete can be sprayed in the same way as paint, etc. An air pressure of between 35 and 40 pounds per square inch is necessary. The concrete mixture is composed of three parts screened sharp sand and one part Portland cement, sufficient water being added to give the desired liquidity. Another use of this mixture is for coating steel plates exposed to wear due to abrasion, such as the steel plates in coal bunkers and similar places. Any wear which does occur will be on the concrete coating. Another use for this mixture is for coating timber piles, etc., immersed in the earth or water. Protection against insects, etc., is also given.]

ANSWERS.

Brick and Concrete: Comparative Prices.

[Answers to "Cantilever," May 11.]

Sir,—Your correspondent's experience would be confirmed by most who have had anything to do with building. Reinforced concrete prices are out of the question for small domestic work. Practice.

Sir,—The building cost of brick compared with reinforced concrete is most favourable to the former for small one-storied buildings such as dwelling-houses, but becomes more favourable to the latter as the size of the building and the necessary structural strength increases. For buildings such as blocks of flats, hotels, factories, etc., to gain the necessary strength reinforcement is necessary. For smaller buildings where brick will give the necessary strength without additional reinforcement, brick is by far the cheapest and most satisfactory. W. E. W.

Anti-Worm Preparation.

[Answers to "Restorer," May 11.]

Sir,—The following describes a process for killing and preventing the attack of woodworms. Cut up some ordinary newsprint fairly small, and immerse a handful in a quart of water. Put this on a slow fire and allow to simmer for thirty minutes. On cooling it will form a stiff jelly. When required for use part of the jelly is diluted with boiling water to form a thin size, and while still hot applied to the wood. Two applications should be made. Another effective way is to give the oak several coats of paraffin oil, so that it soaks well into the wood. The paraffin does not damage the wood. If thoroughly impregnated the prevention of woodworms is complete. W. E. W.

[A communication from Messrs. Cuprinol, Ltd., has been forwarded to our correspondent.—Ed.]

Sir,—Of all preparations, home-made beeswax and turpentine covering all surfaces of affected timbers is the safest cure. The effect is to seal the pores and stop the air which even these small creatures have to breathe to live. Antique.

Septic Tanks.

[Answers to "Sanitas," May 11.]

Sir,—This form of tank is now on the market, and has been used with marked success. At present prices, probably the use of such a unit would probably not pay unless a tank absolutely watertight from outside pressure were required, in which case a difficult job is carried out in a very simple way by using the cast tanks, which are sectional, and have a ready cast cover, with manhole, and dished bottom. A cement marketing company would give detailed information. Drains.

Sir,—To make concrete tanks resistant to any septic solution the concrete tank should be given an internal lining of thin sheet lead. This will prevent actual contact between the septic solution and the concrete. The concrete will give the necessary strength, while the lead lining will prevent any deterioration due to corrosion. W. E. W.

A reply from Everseal Products, Ltd., has been forwarded to our correspondent.

Plastering.

[Answer to "Inspector," May 11.]

Sir,—If there was any possibility of frost having attacked the plaster while it was being applied, this would bring about the effect described. As the cement undercoat was apparently gauged in cement, the trouble did not probably arise out of insufficient wetting of the undercoats before applying the finishing. Super.

Lining for Huts.

[Answer to "C. G. N.," May 11.]

Sir,—I should recommend canvasing and papering with a cheap wall paper to get down to the price at which your correspondent is aiming. Finish.

THE BUILDING TRADE

MATERIALS AND CONSTRUCTION IN THE LIGHT OF MODERN RESEARCH—XIX

By B. PRICE DAVIES, F.S.I., L.R.I.B.A., M.T.P.I.

WATER PIPES AND FITTINGS.

ANOTHER publication issued by the Ministry of Health is the Model Specification of Water Pipes and Fittings, reprinted in 1932. Weights of pipes of the model by-laws of the Ministry of Health are given and much other similar data. Gauges of galvanised tanks are given, and this is where we meet the necessary stipulation that the gauges are for thicknesses before galvanising. Gauges are I.S.W.G. For tanks not exceeding 40 gallons capacity, 16 G.; exceeding 40 gallons and not exceeding 100 gallons, 14 G.; exceeding 100 gallons and not exceeding 200 gallons, 12 G.; exceeding 200 gallons and not exceeding 500 gallons, $\frac{1}{8}$-in. plate.

Copper cylinders are to be able to resist twice normal pressure. The bottom plate is not to be less than 18 I.S.W.G., and the remainder not less than 20 I.S.W.G. Test pressures are to be marked on them. Flow and return pipes are to be not less than 1 in., but in case of gas-heated apparatus, modifications are allowed. In the writer's opinion this 1 in. is not always necessary. He generally uses $\frac{3}{4}$ in. lead or copper (and on one occasion when he did use 1 in., the result was not so good). The cold water feed to the cylinder and the expansion pipe are to be $\frac{3}{4}$ in., and the highest point of the latter is to be 1 ft. 6 in. above the water-line of the cistern for every 25 ft. length between such cistern and the boiler. The British Waterworks Association have complained to the Ministry of Health of the serious inconsistencies occurring in their (M. of H.) weights of lead pipes, for walls of bigger pipes are smaller than those of smaller sizes. These may be amended in the next issue.

B.S.S. (No. 417-1931) is for Galvanised Mild Steel Cold Water Cisterns and Hot Water Tanks and Cylinders. These can be either welded or riveted.

Galvanising.—First they are pickled in acid for cleansing effect and probably for removal of scale, and then dipped in a bath of virgin spelter, containing not more than 2½ per cent. of impurities at a temperature to produce a complete and uniformly adhesive coating of zinc. This is to be subject to test if required.

Standard Sizes.—Open-top cisterns are lettered A, and there are eighteen sizes from 1A for 20 gallons capacity to 18A for 200 gallons. There are thirteen sizes for rectangular hot water tanks from 1B for 20 gallons to 13B for 60 gallons.

Hot water cylinders range from 1C for 20 gallons to 12C for 56 gallons. Complete dimensions are given, and it is pointed out that it is preferable to state dimensions rather than capacity. For open-top cisterns, there are two grades, namely, A and B, and water authorities usually require the former. Grades must be marked on cisterns, and gauges are to Birmingham wire gauge, and this before galvanising. Gauges for open tank cisterns range from 12G to 18G and hot water tanks and cylinders from 12G to $\frac{1}{4}$ in. plate.

Tests.—Open-top tanks must have indications to show if either of grade A or B. They must be without leaks or permanent distortion, and marked to show that they have passed the test of immersion or filling with water. For hot water tanks and cylinders, various thicknesses of metal must stand testing to standards of respective hydraulic tests in lb. per sq. in. Respective heads are stated.

Connections are given for hot water cylinders. For 20-40 gallons, 1¼ in. for flow and return, and 1 in. for others. For 45-56 gallons, 1½ in. for all connections. Positions are indicated on the drawings, which are given. The nominal capacity is to be shown.

Ternary Alloys.

We are now able to come to a very important development in plumbing practice, which is the use of Ternary alloys of lead. No. 1 has 99.25 per cent. lead, 0.25 per cent. cadmium and 0.5 per cent. antimony. No. 2 has 98.25 per cent. lead, 0.25 per cent. cadmium, and 1.5 per cent. tin. It is as corrosive resistant as lead, but superior in mechanical properties. It has increased resistance to fatigue as compared with lead, having three to four times as much, while its tensile strength is about 80 per cent. more. Lead is appreciably embrittled by reduction of temperature to freezing point. Ternary alloys are stated to be more resistant. Ternary alloys "give" like lead in frost, and in high temperatures of about 85 deg. C., alloys offer over twice the resistance of lead in the matter of deformation. For hard and soft waters, where lead is satisfactory No. 1 alloy could be used, but with highly corrosive water, No. 2 can be employed with great advantage. In plumbing the working of the alloys is similar to lead, and they will joint to lead quite easily. Alloys are cheaper because less weight is required, and two-thirds of the comparative weight of lead is the general basis of their use.

Ternary alloy has a resistance to "creep" of 30 per cent. more than lead. (An experienced builder has always maintained that 7 lb. lead is far more troublesome than 5 lb. ditto.) Corrosion and weather-resistance are similar to those of lead. Its use in glazing bars is considered to be superior to lead. Manchester is stated to have adopted No. 2 ternary alloy. Every yard of pipe and every yard super of sheet is marked so as to distinguish it from lead. The trade mark is restricted to manufacturers who conform with its proper use. The mark is :—

with number of manufacturer added. The letters stand for "The British Non-Ferrous Metals Research Association." A table of comparative weights per yard is as follows :—

Diameter.		Ternary Alloy.		Lead for Medium Pressures.
⅜ in.	...	3½ lb.	...	5 lb.
½ ,,	...	5 ,,	...	7 ,,
¾ ,,	...	8 ,,	...	12 ,,
1 ,,	...	11 ,,	...	16 ,,
1¼ ,,	...	14 ,,	...	21 ,,
1½ ,,	...	18 ,,	...	27 ,,

Another lead alloy is Tellurium lead, which is patented. In this case the following claims are made :—that refinement of grain is given and a smoother finish; that it is tougher than ordinary lead and toughens when deformed; that it is about 60 per cent. stronger than ordinary lead, and that expansion and contraction have not such deteriorating effects upon it; that it is more ductile than ordinary lead and that it is not so liable to damage from frost. No saving in weight as compared with ordinary lead is claimed, and its price is a little higher. It is further claimed that it resists fatigue and vibration to a high degree, that it is not so liable to attack of acid, and that it has a decreased solubility in drinking water.

Service Pipes.—The rivalry between lead and copper manufacturers is the cause of the publication of comparisons. The Building Research Station, in one of their publications, state that light copper pipes are quite good if protected from frost. In another quarter frost resistance is discussed, and copper is considered best, then lead, while galvanised iron is stated to be very poor. Possibly the copper pipe referred to is other than light gauge. Copper pipes are stated to be not harmful for drinking water.

The Royal Institute of British Architects has issued a "Report on Damage to Plumbing Work Caused by Frost" (3d., 1930), which contains a lot of useful hints.

Surface Protection (Paints, etc.), Glass and Sundry Materials.

There are numerous British Standard Specifications for paints, oils, leads, etc., and only a few can be dealt with here. A very useful issue is "British Standard Colours" (381C-1931). It gives 57 different tints, has a mask card, and enables a specification to state a definite tint without reference to a manufacturer's tint card.

B.S.S. (144-1921) is for "Creosote for the Preservation of Timber." It describes creosote as essentially a distillate of coal tar and free from an admixture of petroleum or similar oils. The water content is to be not more than 3 per cent.

B.S.S. (242-1926) is for Refined Linseed Oil. This is to be free of foots and other visible impurities. The colour is tested on an iodine solution basis. Its specific gravity at 60 deg. F. is from 0.931 to 0.935. It is to be surface dry in not more than four days.

B.S.S. (243-1926) is for Raw Linseed Oil. When at a temperature of 60 deg. F. to 70 deg. for 24 hours this is to be free of turbidity and visible impurities. Its colour is to compare with an iodine solution. The specific gravity and surface dry tests are the same as those of refined linseed oil.

B.S.S. (259-1926) is for Boiled Linseed Oil. This is to be free of foots and visible impurities. The quantity of resin is to be not more than 1 per cent. The S.G. is 0.935 to 0.955; the drying time is to be not more than 24 hours. It has tests for colour, acid, value, and unsaponifiable matter.

B.S.S. (244-1926) is for Turpentine, Type No. 1. This is to be as free from colour as possible and from water and visible impurities. The specific gravity at 60 deg. F. is to be from 0.862 to 0.872. A distillation test is described.

B.S.S. (290-1929) deals with Turpentine, Type No. 2. This turpentine is distilled from oleo-resins and from resinous wood. It is to be genuine, clear, and free from colour, suspended matter and water. The specific gravity is 0.859 to 0.875. There are several tests.

B.S.S. (245-1926) deals with White Spirit, Type No. 1. This is to be water-wine clear, and free from impurities and objectionable odour. Tests are described for distillation, freedom from grease, residue, neutrality, freedom from objectionable sulphur compounds, volatility, and flash point.

B.S.S. (217-1926) is for Red Lead for Paints. There are two grades, grade A being for paint and grade B for jointing. It is to contain not less than 99.5 per cent. of oxides of lead. Grade A is to contain not less than 72 per cent. of Pb_3O_4, and grade B not less than 43 per cent. It is to be free of coarse particles, and a mesh standard is given. Tests are described for oil absorption, colour, and for matter soluble in water.

B.S.S. (244-1926) is for Genuine White Lead Oil Paste for Paints. This is to contain genuine dry white lead (B.S.S. 239) not less than 91 per cent. nor more than 94 per cent. It is to contain refined linseed oil (B.S.S. 242) of not less than 6 per cent. nor more than 9 per cent. In other words, this paste is a mixture of the dry white lead and linseed oil.

B.S.S. (391-1929) is for Tung Oil. This is China wood oil or tung oil, and it must be free from visible impurities. The S.G. is 0.939 to 0.943. Tests are given for colour, refractive index, iodine value, unsaponification value, heat and insoluble bromide.

B.S.S. (388-1930) is for Aluminium Powder for Paints. This is to be in fine flakes of not less than 97 per cent. aluminium. The copper content is to be not more than 0.1 per cent.

The above are only a few from a wide range of British Standard Specifications.

THE BUILDING RESEARCH STATION

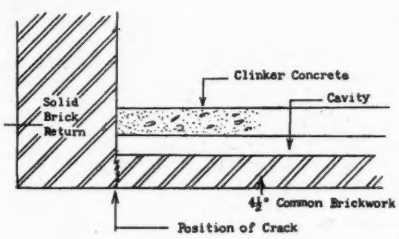
QUESTIONS AND ANSWERS.

THE following abstracts of inquiries* represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for general application to all similar problems.

Cracking of Brick Walls.

A block of new shops had been built and cracks had developed in brick walls at a very early date. The Building Research Station was asked to make an inspection and to report on the reason for the cracking. It had been definitely established that no settlement had taken place.

REPLY.—On inspection it was found that straight vertical cracks had developed at certain external corners of the building, and ran from about dampproof course level up to about first floor level. The cracks did not follow the line of the bond but ran in a straight line through joints and bricks alike. The ground-floor walls were, in general, constructed as 11 in. cavity walls, with 4½ in. of common brickwork externally, 2½ in. cavity, and 4 in. clinker concrete blocks internally. It was found that cracks occurred in each case where the clinker concrete inner lining butted against a solid brick return, as shown on the sketch plan.



An examination of the clinker blocks showed the presence of very large quantities of unburnt coal. It is well known that the presence of certain types of coal in such concrete lead to unsoundness and gross expansion. Even if the coal is not of the "dangerous" type, but is present in large quantities, as in this case, considerable expansion may take place, and there seemed little doubt that, in this instance, expansion of the clinker concrete had exerted a thrust on the solid returns and led to the cracking of the brickwork. Wherever the cavity was continued round the corner no cracking was observed since the expansion was taken up in the cavity.

Without laboratory examination it was not possible to estimate the degree of expansion which was to be expected, but if indeed the unburnt coal present is of the dangerous type expansion might be progressive as long as the blocks remain moist, but would cease as they dry out. If, however, at some later date the blocks ever become saturated with water again, a large and dangerous expansion would ensue. At the best some further expansion must be expected when the blocks are wetted for plastering, and allowance should in any case be made for this by cutting a chase where the clinker concrete comes against solid brick returns Cracking of internal plaster work applied to these blocks seems quite inevitable.

The subject of clinker concrete is dealt with in Building Research Bulletin No. 5: "The Properties of Breeze and Clinker Aggregates and Methods of Testing their Soundness" (H.M. Stationery Office, price 6d.). The simple test described therein, if regularly adopted, would eliminate troubles of this sort. The architect also has a simple method of protection from such troubles, by specifying that the clinker concrete blocks shall comply with requirements of British Standard Specification No. 492-1933, for solid precast concrete partition slabs.

A further point raised in this instance was in connection with the fact that the bricks had cracked. It was suggested that sound bricks would not have broken in this way, and that the blame might be attached to the poor quality of the bricks. In reply, it was stated that the thrust of the expanding concrete was such as would inevitably cause cracking of some sort. If the bricks themselves had not cracked, then cracks would have followed the mortar joints and the position would have been scarcely more satisfactory. In actual fact, however, tension cracks of this sort are nearly always found to develop in a straight line and cause cracking even of very strong bricks.

Prevention of Damp Penetration in a Stone-faced Building.

An important, high, steel-framed building was to be erected with solid stone-faced panel walls. The upper walls were to be 1 ft. 4 in. thick and, since the building was to be in an exposed position and would stand well above its neighbours, some apprehension was felt as to the weatherproofness of these walls. The opinion of the Building Research Station was asked as to the desirability of introducing a vertical asphalt dampproof course. It was pointed out that this would be expensive, and considerable difficulties would arise where the dampproof course came into contact with the steel frame. In addition, it was asked whether the Station would recommend the use of a bitumen or bituminous paint for coating the back, sides and beds of the ashlar masonry.

REPLY.—Taking the second part of the inquiry first, there is certainly much to be said in favour of coating all but the exposed face of the stonework with a waterproof compound. Such a coating prevents the absorption of salts in solution from the backing and jointing materials into the stone facing, and thus reduces the danger of staining, which is frequently due to this cause. A bituminous composition is suitable for the purpose.

The prevention of damp penetration through the walls is a difficult problem, and it is very hard to estimate to what extent penetration is likely to take place. In an exposed position there is certainly some danger, and the provision of a continuous impermeable membrane would be desirable. The insertion of a vertical sheet of asphalt in the manner suggested presents difficulties, particularly in insuring that it is sound and continuous adjacent to the steelwork; and it seems to us that a reliable waterproof film over the back of the stonework would also be effective in this connection. For the purpose of excluding damp, however, this film should be continuous over stone and joints alike, so that a final coat should be applied *in situ* as the work goes up.

Mushroom Cultivation in Cellars of Houses.

An inquirer wished to know whether any injurious effects to persons or property were likely to arise from the establishment of mushroom beds in disused cellar accommodation under houses.

REPLY.—The subject is one on which no first-hand knowledge is available, but it is understood that the beds would consist essentially of a large quantity of manure which would be kept moist, and which would by natural processes of decomposition maintain a gentle heat in the bed. It would be unwise to offer any general recommendation, but it can be foreseen that under certain circumstances the conditions set up in the cellars may be favourable to fungal growths other than edible varieties which it is desired to cultivate.

The introduction of a large quantity of moisture in the beds, together with some elevation of the temperature in the cellar, is likely to result in an atmosphere of high humidity. Air percolating from the cellar to colder portions of the building may there deposit moisture by condensation, and it is quite possible that this might lead to dry-rot fungus development in timber. The most likely path by which the moist air could travel would be below the ground floor, and since this is in any case a vulnerable point, the question of ventilation of the cellars is one which should be carefully considered if mushroom culture is to be undertaken. In many cases it would be safer to construct an independent chamber specifically designed for the purpose.

Failure of Paint.

A large building was being erected according to a strict time schedule, and was almost due for decorating to commence. Several rooms had already been decorated as patterns for the approval of colours, and very bad paint failures had occurred in these rooms. The materials of construction were precast pumice concrete blocks and pumice concrete stanchion casings placed *in situ*, plastered with a single coat of a proprietary gypsum plaster. The architects asked for an inspection to be made with a view to ascertaining the cause of failure, and in particular whether the materials used were in any way incompatible, and whether extensive failures of this sort were likely to occur when the rest of the building was decorated.

REPLY.—On inspection it was evident that the entire trouble was due to the very wet condition of the work. Some efflorescence, blistering and flaking of the distemper film and an extensive growth of mould were observed. The efflorescent salts may be derived either from the blocks, from the jointing material, or from the plaster, and are brought to the surface and deposited as a result of moisture drying out. Blistering and flaking are due to the entrapment of moisture and salts behind the film. Moisture is also necessary for the growth of fungus, the "food supply" being derived from the medium of the distemper. There is no reason to suppose that the materials used are incompatible, and if the work were allowed to dry thoroughly before decorating, no failure would be expected. The conditions in the rooms, however, were very bad. It was observed that the windows were all closed, so that in spite of the fine weather at the time of the visit probably little or no drying was taking place. It is to be noted that pumice concrete tends to retain moisture and to dry more slowly than normal ballast concrete. It may actually contain quite a large amount of moisture though superficially it appears fairly dry.

General decoration of the building was scheduled to start in one week's time. No preparation could be recommended for application to the walls before distempering, which would overcome troubles due to the large amount of moisture present in the walls, and the alternatives therefore seemed to be as follows:—

(1) If exceptionally good drying weather were experienced all the week, and the windows were kept open to take full advantage of this, to carry out the decorating as scheduled with an oil-bound distemper, bearing in mind that some of the work will probably require renewal.

(2) If wet weather were experienced: (*a*) To postpone decorating until the work had had an opportunity of drying out; (*b*) To carry on distempering as scheduled with the certainty of, at any rate, some of the troubles recurring, and the probability that all the work would require renewal in a short period. (*c*) To distemper with an inexpensive casein distemper which will allow the moisture to dry through better than an oil-bound distemper and which, although it would, no doubt, require subsequent renewal, would

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save a good deal of initial expense. Such distempers are, of course, inclined to brush off on the clothing, and for this reason may possibly be considered unsuitable.

The most satisfactory of these would undoubtedly be to postpone distempering for as long as possible. The mould now present in the distemper film would be harmless to timber, but the damp conditions are such as to allow the growth of other wood-destroying fungi. It would therefore be unwise to fix any of the cupboards, etc., in position until this moisture has dried out.

A revised edition of Building Research Bulletin No. 11, "Effect of Building Materials on Paint Films," which deals with some of the points raised in this inquiry, will be published shortly.

Use of Hollow Blocks for Panel-Filling in Framed Structures.

An architect asked for an opinion regarding the suitability of hollow clay blocks for the erection of panel-filled external walls in steel-framed structures.

REPLY.—The use of light-weight materials for wall panels in steel or reinforced concrete framed structures is, of course, of considerable importance in reducing the dead loads to be carried. The suitability of hollow blocks for this purpose has not, perhaps, been fully investigated in all its aspects, but the following may be said to be the function which the external skin of a building has to fulfil :—

1. EXCLUSION OF WIND AND RAIN.—Scientific data on wind and rain exclusion are lacking, but some experiments are now being put in hand at the Building Research Station with the object of ascertaining how certain typical hollow block panel fillings compare with solid brickwork, and cavity wall construction in brickwork. On purely theoretical grounds, the reduction of the amount of solid material possessing a porous, capillary structure should be an advantage, but the problem of moisture penetration through walls is intimately related not only to the capillary structure of the walling unit, but also (and this may be even more important), to the form of the joint and the nature of the jointing material. In selection of a jointing material for a hollow block wall we are bound by the same limitations as exist in the case of ordinary brickwork. The form of the joint, however, may be varied within quite wide limits. The method of manufacture of hollow blocks and the size of the unit makes it possible to devise special sections whereby the form of the joint is such that a broken path is presented for the passage of rain.

2. THERMAL INSULATION.—The thermal resistance afforded by an external wall in hollow blocks should be at least as good as the usual thicknesses of solid brickwork. Actually, tests show that the thermal insulation afforded by hollow block walls is quite good, and in equal thicknesses may be expected to be better than solid brickwork.

3. STRENGTH.—In the case of a panel filling it is obviously unnecessary to demand any high strength of a walling material. The values for strength of hollow blocks laid down might be considered as dictated by the requirement of obtaining a sound, well-fired and durable unit, rather than implying some definite load-bearing factor of safety.

4. FIRE RESISTANCE.—A panel filling should possess some degree of fire resistance commensurate with that afforded by other parts of the structure. Hollow clay blocks, by nature of their composition, may be expected to display good resistance, but in the absence of facilities for testing according to British Standard Specification, it would be hazardous to attempt to forecast the actual fire-resistant properties of any particular method of construction.

5. ACOUSTIC CONSIDERATIONS.—It is probably safe to assume that economy in weight of a panel filling is incompatible with an increase in efficiency for sound insulation. Since, however, our external walling must inevitably be broken up by window openings, it would be unreasonable to stress unduly the importance of the sound insulation of an external wall panel except in very special cases where elaborate sound-proofing treatment is given to the windows.

To summarise, it may be said that hollow block panel fillings should have adequate strength for the moderate loads to which they may be expected to be subjected. The thermal insulation they afford should be better than an equal thickness of massive solid walling materials. The fire resistance of a hollow block wall panel is conjectural in the absence of testing facilities in this country, but there is no reason, from the nature of the material, to apprehend any serious shortcoming in this direction. As regards resistance to penetration of rain, a particularly important property in external walls for tall buildings, it can be said that the hollow extruded block might well possess certain distinct advantages if full advantage be taken of the opportunities it offers for formation of special shapes. It should be possible to design a unit so that the capillary channel through the horizontal joints can be broken. Unless due regard is paid to the evolution of a good shape, in so far as this affects the form of the joints, the hollow block is not likely to possess any considerable advantage in the direction of improved weather resistance. So far as sound insulation is concerned it has been pointed out that the economy in weight afforded by hollow blocks is incompatible with enhanced sound insulation. In view of the fact that in any case external walls are broken up by window openings, it is probable that a hollow block will not be a serious disadvantage.

LAW REPORT

OFFICIAL REFEREE'S COURT.

Before MR. S. R. C. BOSANQUET, K.C.

CONTRACTORS' ACTION AGAINST BUILDER.

P. Gallagher, Ltd., and Martin Gallagher v. Wood.

In this case Messrs. P. Gallagher, Ltd., and Mr. Martin Gallagher, public works contractors, of Western-chambers, South-street, Romford, claimed from Mr. George Wood, builder, of Park View, Station-road, Leigh-on-Sea, Essex, £474 as the balance of their charges under a contract dated July 16, 1930, for the construction of roads and sewers on the Woodhall Estate, Hornchurch, Essex.

The plaintiffs' case was that they contracted with the defendant to execute the work for £10,900, but on February 9, 1933, the defendant wrongfully repudiated the contract and refused to allow plaintiffs to complete. Work to the value of £8,757 had then been done, of which £474 was still owing. The plaintiffs also claimed £232 as their profit on the uncompleted portion of the work.

The defendant by his defence admitted repudiating the contract, but he also pleaded that it had been previously terminated by mutual consent, and that as his architect had not given a certificate for the sum then claimed it was not due, but he offered £80 3s. 10d. to satisfy the claim and paid that amount into Court. The defendant further alleged that the work executed by the plaintiffs was not in accordance with the contract and was not proceeded with promptly.

Mr. G. O. Slade appeared for the plaintiffs; and Mr. E. W. Chance for the defendant.

Evidence having been given,

The Official Referee, in delivering a considered judgment, said that, having considered the evidence, he came to the conclusion that the plaintiffs were entitled to succeed on both their claims, viz., on *quantum meruit* and for damages for breach of contract. The result was that he gave judgment for the plaintiffs for a total of £665 2s. 9d., with costs, the £80 3s. 10d. in Court to be paid out to the plaintiffs in part satisfaction of the judgment debt without further order.

THE WELDING OF COPPER PIPES

A lecture and demonstration on this subject was delivered recently before a meeting of the London Council for the National Registration of Plumbers, the lecturer being Mr. W. L. Kilburn, R.P., of the British Oxygen Company.

Increasing interest, said the lecturer, was now being taken by the plumbing trade in the extensive use of light copper gauge in the construction of the modern building, installation of domestic water supplies and heating systems. It was admittedly difficult to make a sound weld with ordinary grades of copper. Welders, who had regularly obtained excellent results when working on iron and steel, had been greatly discouraged by their initial attempt to weld such copper. The successful welding of copper depended upon the following essentials :—(1) Weldable grades of copper, as a base metal; (2) filler rod of a composition suitable for the process; (3) a suitable flux which could be conveniently applied; and (4) correct welding technique and flame adjustment. Numerous experiments had conclusively shown that commercial tough pitch copper sheet copper was seldom suitable for welding, but that properly de-oxidised copper, when properly treated, was quite satisfactory for welding.

Thin plates or sheets up to 1/16th in. thick should be flanged along the edges to be welded, the depth of the flange being 1/16th in. and the edges of the flange melted right down to the plate surface. Component parts, when assembled, could be tack-welded and the flange pinched together with a pair of pliers as the weld proceeded. Very little filler rod was required, just an occasional drop of metal being added at regular intervals as the weld progressed to prevent it getting pasty or hollow. Care should be taken that the weld penetrated to the underside of the plate or sheet, and there should be no signs of the flange in the completed weld. Hammering on a mandrel would render the weld difficult to detect, and would remedy the annealing effect of the blowpipe. By this method buckling was to a large extent avoided. Asbestos might be found necessary, under certain conditions, on constructional work where copper sheet was laid on wood; it would conserve the heat when placed under the weld during welding. Many types of joints of varying designs and quality could be devised, but experience had shown that plumbers were chiefly interested in the following :—Flanged butt joint, butt-tee joint, flanged butt-tee joint and the built-up tee joint. Copper when welded was altered in the structure, and was changed from a milled to a cast metal in the line of fusion. To give it back its former qualities the copper weld should be hammered along the line of weld. That, of course, could be done in the case of sheet, but was rather difficult in pipe welds. By heating the pipe joint after completion of welding, and then plunging in water or, if *in situ*, quenching with water, the joint was more efficient than when left untouched.

Some towns appeared, from their regulations, said the lecturer, to be suspicious of copper as a means of conveyance of drinking water, but facts had proved, in most instances, that there was no justification for this assumption, either in the nature of the water supplied or in other local circumstances. In cases, however, where water had a very acid content copper should not be used. Copper was less soluble in water than either lead or iron. Tests had been made in regard to both light-gauge copper tubes and the equivalent lead pipes with the object of establishing a comparison of the behaviour of the two materials when subjected to special stresses when laid underground subject to traffic. It was found, with the one exception of the 1½-in. diameter copper pipe, the advantage was definitely with light copper gauge. The equivalent lead pipe with no strength to resist bending might easily be permanently deformed under the action of its own weight.

NEW BUILDINGS IN LONDON.

BECONTREE.—CHURCH.—The L.C.C. has sanctioned the selling of a plot of land in Goresbrook-road, to the London Baptist Property Board, Ltd., for the erection of a church.

BLACKFRIARS.—POST OFFICE.—H.M.O.W. invite tenders, returnable by June 4, for adaptations to Blackfriars branch P.O. Bills of quantities are obtainable (upon deposit of £1) from Room 65d, Third Floor, H.M. Office of Works, S.W.1.

BOW.—BUILDING.—The L.C.C. has recommended £17,960 in respect of the provision of a new reception and out-patients' department, etc., at St. Andrew's Hospital.

BROMLEY. — SCHOOL. — The British and Foreign Schools Society, Temple-chambers, Temple-avenue, E.C.4, have accepted the tender of Messrs. C. Miskin and Son, Ltd., Romelands, St. Albans, for the reconstruction of the Old Palace as a training school. The plans have been prepared by Mr. Robert Robertson, F.R.I.B.A., 12A, Cliffords Inn, Fleet-street, E.C.

CAMBERWELL.—FACTORY.—Messrs. Liqufruta, Ltd., 193, Camberwell-grove, S.E.5, have prepared plans for a two-story factory, etc., in Fowler-street, S.E. The contractors are Messrs. T. Rider and Sons, Ltd., 181, Union-street, S.E.1.

CATERHAM.—ADDITIONS.—Mr. H. R. Martin, of Caterham, is the surveyor for additions to the church hall for the parochial council of St. John's. The quantities have been prepared by Messrs. Reynolds and Young, 150, Southampton-row, W.C.1, and the builder is Mr. G. W. Hitchcox, High-street, Caterham, who tendered at £1,650.

CATFORD.—SHOPS.—Plans have been prepared and submitted by Mr. Stanley F. Prior, estate agent, Catford Bridge, S.E.6, to the Lewisham B.C. and approved for shops and flats over and garages at the rear upon a site adjoining 10, Perry Hill. No builders have yet been appointed. The contract has been placed with Messrs. Beale and Co., of Catford.

CHEAM.—REBUILDING.—Of the "Harrow" public-house is proposed by Messrs. Mellersh and Neale, Ltd., of the Reigate Brewery. The contract has been let to Messrs. H. H. and F. Roll, Ltd., 87, High-street, Epsom. The architects are Messrs. Williams, Pettett and Gardner, F.R.I.B.A., 1, Ashley-road, Epsom.

CRICKLEWOOD. — ALTERATIONS.—Messrs. Soole & Son, Ltd., Dunstable Works, Sheen-road, Richmond, have secured a contract from H.M.O.W. for alterations to the branch post office.

CROYDON.—STORES.—Messrs. Marks and Spencer, Ltd., are to have a new stores with showrooms and offices over, at 116-120, North End and Poplar-walk. The architects are Messrs. W. A. Lewis and Partners, 11, Finsbury-square, E.C.2, and the contractors are Messrs. Bovis, Ltd., 35, High-street, W.1.

DAGENHAM.—SCHOOL.—The Essex E.C. recommend that sketch plans for the erection of a secondary school in Parsloes-avenue, with accommodation for 490 boys and girls, at an estimated cost of £47,093, be approved.

DAGENHAM.—ENLARGEMENT.—The Essex E.C. has approved the sketch plans for the enlargement of Rush Green Council School by the provision of a standard portable building with accommodation for 450-500 children, at a cost of £7,210.

DEPTFORD. — GARAGES. — Messrs. Sweetland and Sons, 402-404, Evelyn-street, have made an application to the B.C. for consent to the erection of lock-up garages upon a site abutting upon 12, Edward-street and 1, Grinling-place.

DOVER-STREET. — IMPROVEMENTS. — Are to be carried out at No. 29 by Messrs. A. E. Symes, Ltd., 1a, Carpenters-road, Stratford, E.15. The plans submitted to the Westminster City Council by Messrs. Chesterton and Sons, surveyors, 116, Kensington High-street, W.8, have been approved.

EALING.—DEVELOPMENT.—Gaumont-British Picture Corporation are planning to build and equip an exterior "lot" on the Islips Manor estate. Messrs. Nicholas and Dixon-Spain, architects, 19, Hanover-square, W.1, have submitted lay-out plans to the Ealing Council.

ELEPHANT AND CASTLE.—ALTERATIONS.—And additions to be made to showrooms at 76, London-road, S.E., for Messrs. J. Rose and Son. The architect is Mr. C. H. James, F.R.I.B.A., 33, Bedford-place, W.C.1.

FELTHAM. — TELEPHONE EXCHANGE. — A telephone exchange and garage are to be erected at Feltham, Middlesex. Tenders are now invited (upon deposit of £1) by H.M. Office of Works, S.W.1, and are returnable by June 1.

FULHAM.—EXTENSIONS.—The B.C. are to invite tenders, returnable by July 2, for the superstructure of Section Q of the generating station.

FULHAM. — REBUILDING. — Mr. A. W. Blomfield, architect of Messrs. Watney, Combe, Reid and Co., Ltd., has applied to the B.C. for consent to the rebuilding of "The Rose" public-house, Sands End-lane.

GOLDERS GREEN. — ALTERATIONS. — And additions are to be made to the Refectory Restaurant, Finchley-road, N.W. The architects are Messrs. Welch, Cachemaille-Day and Lander, 7, New-square, W.C.2. The contractors are Messrs. James Smith and Sons (Norwood), Ltd., Carmichael-road, S.E.25.

HAMMERSMITH.—BUILDING.—The L.C.C. has recommended £5,335 in respect of the provision at Hammersmith Hospital, Du Cane-road, of additional maternity and isolation accommodation.

HAMPSTEAD. — FLATS. — Mr. H. J. Palmer, F.I.A.A., architect to the Morris Estates, Ltd., Dorland House, Regent-street, S.W.1, has prepared plans for 18 flats of six stories in Finchley-road, N.W., next to the telephone exchange. The builders are Messrs. Henry Kent (Builders), Ltd., 31, Beacon-road, Hither Green, S.E.13.

HANOVER-SQUARE.—ALTERATIONS.—And improvements are to be made to No. 5, for Martins Bank, Ltd., Liverpool. The plans are by Messrs. Elcock and Sutcliffe, FF.R.I.B.A., Adam House, Strand, W.C.2.

HANWELL.—HOME.—The L.C.C. recommended £36,500 in respect of the erection and equipment of a nurses' home at Hanwell Mental Hospital, W.7.

HARROW.—ADDITIONS.—The Harrow and Wealdstone District Hospital, Roxeth-hill, are to have a new out-patients' department. The architects are Messrs. Mitchell and Bridgwater, AA.R.I.B.A., 17, Hanover-square, W.1. The building contract has been placed.

HAYES. — CHURCH. — For erection of a church and school at Hayes End, for the Methodist Union Building Committee, a contract has been placed with Messrs. A. and B. Hanson, Ltd., of Southall. The architects are Messrs. Arthur Brocklehurst and Co., F.R.I.B.A., 10, Norfolk-street, Manchester.

HAYES.—FACTORY.—And offices are to be built in Silverdale-road, for Messrs. Kandya, Ltd., furniture manufacturers, who have placed the contract with Messrs. Chessums, Ltd., Imperial Works, Tottenham, N. The plans are by Messrs. Wallis, Gilbert and Partners, 15, Elizabeth-street, S.W.1.

HIGHGATE.—IMPROVEMENTS.—The L.C.C. has approved £7,945 in respect of works of improvement to Archway Hospital.

HORNCHURCH.—ADAPTATION.—And enlargement of the Hornchurch Park-lane Council School for 500 children, at £5,109, has been recommended by the Essex E.C.

HORNSEY. — FLATS. — The T.C. has approved plans for the laying-out of Oakfield Estate, Haslemere-road, and also for the erection of seven blocks of flats, which were submitted by Mr. H. J. White, architect, 413, Holloway-road, N. Messrs. John Willmott and Sons (Hornsey), Ltd., 40, Tottenham-lane, N.8, have secured the contract.

ILFORD.—SHOPS.—Messrs. H. and H. F. Higgs, Ltd., Station Works, Hinton-road, Herne Hill, S.W., are to build a block of 6 shops with flats above in Cranbrook-road. The plans are by Messrs. Lewis Soloman and Son, 21, Hart-street, W.C.1.

JERMYN-STREET. — REBUILDING. — Mr. Herman Appenrodt, proprietor of the Haymarket Hotel and Brasserie, Nos. 1-5, Jermyn-street, proposes to modernise the premises, at approximately £60,000. Tenders will be invited in a few weeks. The plans are by Mr. Ernest Schaufelberg, 106, Jermyn-street, S.W.1.

KENSINGTON.—SHOPS.—A contract has been placed with Messrs. A. Roberts and Co., Ltd., 74, Earls Court-road, W.8, for 42 flats and shops at Kensington, W.8. Mr. H. J. Palmer, F.I.A.A., architect to the Morris Estates, Ltd., Dorland House, Regent-street, S.W.1, has prepared the plans.

KENSINGTON.—HOUSING.—The B.C. has received sanction from L.C.C. to the borrowing of £6,016 for nine tenements on the site of 1, 3 and 5, Adair-road, and 86 and 88, Southam-street, and to the borrowing of £2,805 for acquisition of property for extension of Council depot at Walmer-road.

LAMBETH.—SCHOOL.—The L.C.C. has informed the B.C. that, for the purpose of providing 848 elementary school places, they propose to appropriate from housing purposes a site on the Vassall-road housing estate.

LEYTON.—SCHOOL.—The Essex E.C. recommend £1,822 for enlargement of the County High School for Boys.

MILE END-ROAD. — BUILDING. — Messrs. Henry Dawson and Son, 20, Ludgate-hill, E.C.4, are the architects and surveyors for shops on a site of Nos. 128 and 150. Messrs. Trollope and Colls, Ltd., 5, Coleman-street, E.C., have secured the contract.

MITCHAM. — STORES. — Messrs. F. W. Woolworth and Co., Ltd., 1, New Bond-street, W.1, are to build a branch stores at London-road. The plans are by the company's own staff, who will also execute the building works.

NORTHWOOD.—SHOPS.—The contract for six shops with maisonettes above has been placed with Messrs. James Stewart and Sons (Tottenham), Ltd., 174, West Green-road, N.15. The architects are Messrs. Dixon and Braddock, 115, Gower-street, W.C.1.

OXFORD-ROAD.—IMPROVEMENTS.—Messrs. L. and W. Whitehead, Ltd., 69, Clapham-road, S.W., are carrying out improvements at No. 403, for Messrs. Lloyds Bank, Ltd.

PECKHAM.—REBUILDING.—Of the "Duke of Wellington" public-house is to be undertaken to the plans of Messrs. E. J. Eedle and

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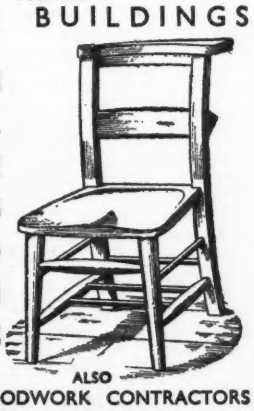
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EST. 1858

Myers, FF.R.I.B.A., 8, Railway-approach, S.E.1.

PINNER.—CLUB.—The United Services Club (Pinner), Ltd., are to build new club premises at Leighton-avenue. A contract has been placed with Messrs. Edwardson, Ltd., Paines-lane. The architect is Mr. John Millichap, 39, Midcroft, Ruislip.

PUTNEY HEATH.—FLATS.—Exeter House, Ltd., 89, Kingsway, W.C.2, is to build a large block of high-class flats, for which a contract has been placed with Messrs. Trollope and Colls, Ltd., 5, Coleman-street, E.C.2. The plans are by Messrs. Trehearne and Norman, Preston and Co., Windsor House, Kingsway, W.C.2.

RICHMOND.—BANK.—Messrs. Barclays Bank, Ltd., 54, Lombard-street, E.C., have acquired Nos. 7-9, George-street, for reconstruction as branch banking offices. Plans are being prepared by Messrs. Couch and Coupland, 37, Sheen-road, Richmond.

ROMFORD. — EXTENSION. — The Public Assistance Committee of the Essex C.C. recommend extension to the nurses' home and provision of a training school at Romford, at £33,000.

ST. PAUL'S-CHURCHYARD. — FLATS. — Plans for the reconstruction of the premises of Messrs. James Spence and Co., Ltd., into self-contained flats are now in hand. The architect is Mr. G. E. Nield, F.R.I.B.A., Outer Temple, W.C.2. Tenders will be invited shortly.

SHADWELL.—FACTORY.—A contract for excavation works at Nos. 184-187, Shadwell High-street, has been placed with the Greenham Excavation Co., Ltd., London-road, Isleworth, in connection with the proposed factory for Messrs. Meredith and Drew, Ltd. The plans are by Mr. Ewart S. Andrews, 329, High Holborn, W.C.1. Work will be carried out by direct labour.

SHOREDITCH.—HOUSING.—The B.C. are proposing a housing scheme on the sites of 67-83 (odd), Pritchards-road, and 6-10, Oakford-place, which is to be declared a clearance area.

SOUTHWARK.—REBUILDING.—Messrs. C. Downing and Sons, Ltd., are to reconstruct their showrooms at Nos. 61-62, London-road, S.E. The builders are Messrs. C. and S. Bradford, 1, Penton-place, S.E.17. The architect is Mr. F. A. Powell, 344, Kennington-road, S.E.11.

SOUTH KENSINGTON. — EXTENSION. — H.M.O.W. have placed a contract with Messrs. A. Roberts & Co., Ltd., 74, Earl's Court-road, Kensington, W.8, for an extension to the Natural History Museum spirit building.

STOCKWELL.—EXTENSIONS.—The L.C.C. sanctioned £22,740 for extension of isolation accommodation and alterations to staff quarters at South-Western Hospital.

SYDENHAM.—ALTERATIONS.—And additions are to be made to the Britannic House Club, Kangley Bridge-road, S.E., to the designs of Mr. J. M. Wilson, A.R.I.B.A., Windsor House, Victoria-street, S.W.1. The contract has been placed with Messrs. A. Coldman & Son, Ltd., 60, Heber-road, S.E.22.

TOWER HILL. — EXCHANGE.—H.M.O.W. have placed a contract with Messrs. Higgs & Hill, Ltd., Crown Works, South Lambeth-road, S.W., for the erection of the Mint Telephone Exchange.

WHITTON.—SHOPS.—Messrs. Marshall and Tweedy, FF.R.I.B.A., 4, Cavendish-place, Cavendish-square, W.1, have been appointed architects for a block of shops and flats, to be erected in Station-road, Whitton. The contract has been let to Messrs. E. and J. Cotton, Ltd., of Syon Hill Estate, Isleworth.

WOODFORD.—SCHOOL.—The Essex E.C. has resolved that the sketch plans for the erection of Woodford proposed Council Senior School, with accommodation for 960 to 1,120 pupils, at £38,656, be approved.

WOODFORD GREEN.—HOUSES.—Mr. S. John Clapp, 62, High-road, is the architect for 15 houses to be erected. Tenders are to be invited.

NEW CINEMAS

BELFAST.—Mr. Thomas McLean, 26, Howard-street, Belfast, has prepared plans for the erection of the cinema proposed in Crumlin-road for Savoy Picture House, Ltd. Tenders for the erection are now invited (returnable by May 26), and bills of quantities may be obtained, upon deposit of £2 2s., from the quantity surveyors, Messrs. McCarthy and Lilburn, Scottish Provident Buildings, Belfast.

BEXLEY HEATH.—The owners of the Cinema, Broadway, have under consideration the enlargement of their building to seat 2,500, including a new dance hall. No plans have been definitely adopted yet.

BRADFORD.—Alterations are to be carried out at the Tatler Picture House, Thornton-road, for the Regal Cinemas (Warrington), Ltd. The architect is Mr. Wm. Illingworth, Sunbridge-road, Bradford.

BURTON-ON-TRENT.—Mr. Thomas Jenkins, F.R.I.B.A., Arcade Buildings, Burton-on-Trent, is to prepare plans for the conversion of the Opera House for Burton Picturedrome Co., Ltd.

CANNING TOWN.—Mr. George Smart, 331, Mare-street, E.8, is to build a large cinema in Barking-road, to be called the New Imperial, with seating space for 2,000 persons. Work will be by direct labour methods, but a contract for pile foundations has been placed with the Francois Cementation Co., Ltd., 39, Victoria-street, S.W.1. The plans are by Mr. Charles Brett, F.R.I.B.A., "Newlynne," Waxwell-lane, Pinner, Middlesex.

CHIPPING NORTON.—Mr. Sydney Hall, Benge Hill, Evesham, proposes the erection of a cinema to seat 500 in New-street. The scheme has been approved by the magistrates, to whom the plans were explained by Mr. W. P. Y. Seth, consulting constructional engineer, 274, Deansgate, Manchester.

CORBY.—Messrs. Stewarts and Lloyds, Ltd., Winchester House, E.C.2, have laid plans before Kettering T.C. providing for the erection of a cinema in Rockingham-road, Corby, Leicestershire.

FAVERSHAM, KENT.—East Kent Cinemas, Ltd., propose to erect a cinema at Peter-street. Plans provide for seating for 700, and have been prepared by Mr. W. Leslie Carter.

GREAT WIGSTON, LEICS.—A Leicester syndicate proposes to erect, at a cost of £15,000, a cinema to seat 1,000 persons in Long-street and Willow-place. Plans will be prepared by Mr. Frank H. Smith, 6, Pocklington's-walk, Leicester.

HINCKLEY.—Plans have been prepared by Mr. Hurley Robinson, F.R.I.B.A., 6, Cherry-street, Birmingham, for a cinema to seat 1,000 at the rear of the old Borough Theatre. The old theatre will be reconstructed as part of the scheme. No contracts have been placed yet.

HORLEY.—The tender of Mr. J. Crewdson, Bank Chambers, Horley, Surrey, has been accepted by Messrs. Shipman and King, 26, Charing Cross-road, W.C.2, for their proposed new cinema, to seat 1,000 persons. Plans are by Mr. H. W. Coussens, 35, Havelock-road, Hastings.

HUNGERFORD, BERKS.—Mr. F. Edward Jones, F.R.I.B.A., 26, Gloucester Mansions, Cambridge-circus, W.C.2, has prepared plans for a cinema in Dog-lane. Hungerford R.D.C. has deferred consideration pending the views of the Berks County Town Planning Authority.

HURSTPIERPOINT.—Mr. Stanley Collins proposes the erection of a new cinema in Cuckfield-road, Hurstpierpoint. Plans have been approved by the Haywards Heath Petty Sessions.

INVERNESS.—Mr. Alex. Cattenach, architect, Kingussie, has prepared sketch plans for alterations to the Central Hall Picture House, as a combined theatre and cinema. The cost is estimated at £5,000. Dean of Guild Court has approved the plans.

LARNE, IRELAND.—Plans were submitted for a new cinema to be erected by Mr. Curran, Belfast, at the corner of Chapel-lane and Main-street, with three adjoining shops.

LEICESTER.—A local syndicate proposes erecting a building to be known as the "Woodgate Hippodrome," at the junction of Woodgate and Blackbird-end. Seating is to be provided for 1,600 persons.

LIVERPOOL.—Mr. Alistair G. MacDonald, A.R.I.B.A., 13, Queen Anne's-gate, S.W.1, is the architect for a news-reel cinema at the railway station for the British News Theatres, Ltd. Contracts are not yet let.

LUDLOW.—Messrs. Benslyn and Morrison, F. and A.R.I.B.A., 17, Easy-row, Birmingham, are architects for the erection of a new cinema at Craven Arms, near Ludlow, for Mr. J. N. Robson.

MANCHESTER.—Mr. Alistair G. MacDonald, A.R.I.B.A., 13, Queen Anne's-gate, S.W.1, is architect for a news-reel cinema at the corner of Oxford-street near the Princes Theatre for British News Theatres, Ltd.

NEWTON ABBOT.—Tenders for the new super cinema, which is to be erected on a site in Wolborough-street for Mr. W. C. Gilley, Torquay, are expected to be invited very shortly. The building, which will have a balcony and will seat nearly 1,000 persons, has been designed by Mr. Howard Williams, F.R.I.B.A., 2, St. Andrew's-place, Cardiff. A cinema organ is provided for.

NORMANTON.—Contracts have been placed for the demolition and rebuilding of the old Empire Cinema as follows:—Building works, Mr. R. K. Poskitt, Beal, near Goole; steelwork, Messrs. Henry Barrett and Sons, Ltd., Thornton-road, Bradford; and concrete works, Messrs. Concrete, Ltd., Stourton, near Leeds. The architects are Messrs. Pennington, Hustler and Taylor, Ropergate, Pontefract, Yorks.

PICCADILLY.—Messrs. F. G. Minter, Ltd., Ferry Works, Putney, S.W., have obtained the building contract for the news cinema which British News Theatres, Ltd., propose on the site of the Eros Café, Shaftesbury-avenue and Piccadilly-circus, W. Plans are by Messrs. Robert Atkinson, 126, Wigmore-street, W. About 240 seats will be provided.

PORTLAND.—A building contract will be placed for the erection of the Regal Cinema at Clearmont, Fortuneswell, Portland. Plans for the erection of this cinema were passed nearly two years ago, but the project was then held up by the promoters, Messrs. J. Herbert and Sons. The architects are Messrs. Andrews and Andrews, Dorchester-road, Weymouth. About 600 seats will be provided.

ROCHESTER.—It has been decided to carry out the building of the proposed "Majestic" cinema at Star Hill by direct labour under the supervision of the building owners, the Majestic (Rochester), Ltd., 172, Buckingham Palace-road, S.W.1. The building will cost £70,000 and has been designed by Mr. H. Weston, Elizabeth-street, S.W.1.

SHIRLEY, WARWICKSHIRE.—The Warwickshire County Licensing Committee has passed plans for the erection of the "Odeon" cinema at the corner of Stratford-road and Solihull-road, Shirley, near Birmingham. Plans are by Messrs. Satchwell and Roberts, LL.R.I.B.A., 6, New-street, Birmingham.

WESTON-SUPER-MARE.—The local justices have approved plans for the "Odeon" Cinema, to be erected at Weston-super-Mare at Walliscote- and Locking-roads, for the Odeon Circuit, Cornhill House, Bennets Hill, Birmingham. Plans are by Mr. T. Cecil Howitt, F.R.I.B.A., Exchange Buildings East, Nottingham, and the contract has been placed with Messrs. C. Bryant and Sons, Ltd., 65, Whitmore-road, Birmingham. 1,850 seats will be provided.

WOLVERHAMPTON.—Mr. Hurley Robinson, F.R.I.B.A., 6, Cherry-street, Birmingham, is architect for a 1,500-capacity cinema in Stafford-lane for a local syndicate. The estimated cost is £20,000.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1934.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Crafts-men.	Lab-ourers.
Aberdare	1/5	1/0½
Abergavenny	1/5	1/0½
Aberystwyth	1/2	10½
Accrington	1/5½	1/1½
Aldeburgh	1/1½	10½
Aldershot	1/2½	11
Alfreton	1/5½	1/1½
Alnwick	1/4½	1/0½
Altrincham	1/5½	1/1½
Amble	1/4½	1/0½
Amersham	1/3½	11½
Ammanford	1/5½	1/1½
Andover	1/2½	11
Arundel	1/2½	11
Ascot	1/3½	11½
Ashby-de-la-Zouch	1/4	1/-
Ashford (Kent)	1/2½	11
Ashford (Middx).)	1/4	1/-
Ashington	1/4½	1/0½
Ashtead	1/4	1/-
Ashton-under-Lyne	1/5½	1/1½
Aylesbury	1/2½	11
Aylsham	1/2	10½
Bagshot	1/2½	11
Banbury	1/3	11½
Barnsley	1/5½	1/1½
Barnstaple	1/3½	11½
Barrow-in-Furness	1/5½	1/1½
Barry	1/5½	1/1½
Basingstoke	1/3	11½
Bath	1/4½	1/0½
Batley	1/5½	1/1½
Beaconsfield	1/3½	11½
Beccles	1/2	10½
Bedford	1/4½	1/0½
Berkhamsted	1/3	11½
Berwick	1/4½	1/0½
Beverley	1/5½	1/1½
Bexhill	1/3	11½
Bideford	1/3½	11½
Biggleswade	1/3	11½
Billericay	1/2	10½
Birchington	1/3	11½
Birkenhead	1/7‡	1/2½
Birmingham	1/5½	1/1½
Bishop Auckland	1/5	1/0½
Bishops Stortford	1/3	11½
Blackburn	1/5½	1/1½
Blackpool	1/5½	1/1½
Blyth	1/5½	1/1½
Bognor Regis	1/3	11½
Bolton	1/5½	1/1½
Bournemouth	1/4	1/-
Bracknell	1/3	11½
Bradford	1/5½	1/1½
Bradford-on-Avon	1/2½*	11
Braintree	1/3½	11½
Brentwood	1/5	1/0½
Bridgwater	1/3	11½
Bridlington	1/5	1/0½
Brighouse	1/5½	1/1½
Brighton	1/4	1/-
Bristol	1/5½	1/1½
Broadstairs	1/3	11½
Bromsgrove	1/4½	1/0½
Bromyard	1/2	10½
Buckley	1/5½	1/1½
Bungay	1/1½	10½
Burnham-on-Crouch	1/2	10½
Burnley	1/5½	1/1½
Burslem	1/5½	1/1½
Burton-on-Trent	1/5½	1/1½
Bury	1/5½	1/1½
Bury St. Edmunds	1/2½	11
Buxton	1/5	1/0½
Byfleet	1/3	11½
Cambridge	1/5	1/0½
Canterbury	1/3	11½
Cardiff	1/5½	1/1½
Carlisle	1/5½	1/1½
Carnforth	1/5½	1/1½
Castleford	1/5½	1/1½
Caterham	1/4	1/-
Chard	1/2*	10½
Chatham	1/3½	11½
Chelmsford	1/4	1/-
Cheltenham	1/4	1/-
Chepstow	1/4½	1/0½
Chertsey	1/4	1/-
Chester	1/5½	1/1½
Chesterfield	1/5½	1/1½
Chichester	1/3	11½
Chorley	1/5½	1/1½
Cirencester	1/3*	11½
Clacton	1/3½	11½
Cleveleys	1/5½	1/1½
Clitheroe	1/5½	1/1½
Cobham	1/4	1/-
Colchester	1/4	1/-
Colwyn Bay	1/4½	1/0½
Congleton	1/5	1/0½
Coventry	1/5½	1/1½
Cranbrook	1/2	10½
Cranleigh	1/2½	11
Crawley	1/3	11½
Crewe	1/4½	1/0½
Cromer	1/2½	11
Crowborough	1/3	11½
Cuckfield	1/3	11½
Darlington	1/5½	1/1½
Darwen	1/5½	1/1½
Daventry	1/4	1/-
Deal	1/3	11½
Denbigh	1/4	1/-
Derby	1/5½	1/1½
Devizes	1/2*	10½
Dewsbury	1/5½	1/1½
Didcot	1/3½	11½
Diss	1/2	10½
Doncaster	1/5½	1/1½
Dorchester	1/2½*	11
Dorking	1/3	11½
Dover	1/3	11½
Dovercourt	1/3½	11½
Driffield	1/4	1/-
Droitwich	1/4½	1/0½
Dudley	1/5½	1/1½
Dunstable	1/2	10½
Durham	1/5½	1/1½
Eastbourne	1/4	1/-
E. Glam. (Mon. Val.)	1/5	1/0½
East Grinstead	1/3	11½
Edenbridge	1/3	11½
Ely	1/2	10½
Epping	1/4½	1/0½
Exeter	1/4½†	1/0½
Exmouth	1/3½	11½
Fakenham	1/2	10½
Falmouth	1/3½	11½
Fareham	1/3	11½
Faversham	1/2½	11
Felixstowe	1/4	1/-
Filey	1/4	1/-
Fleetwood	1/5½	1/1½
Flint	1/5	1/0½
Folkestone	1/3	11½
Frinton-on-Sea	1/3½	11½
Frome	1/2½*	11
Gainsborough	1/4½	1/0½
Gateshead	1/5½	1/1½
Gillingham	1/3½	11½
Glossop	1/5	1/1½
Gloucester	1/4½†	1/0½
Godalming	1/3½	11½
Goole	1/4½	1/0½
Gosport	1/4½	1/0½
Grantham	1/4	1/-
Gravesend	1/5	1/0½
Gt. Yarmouth	1/3	11½
Grimsby	1/5½	1/1½
Guildford	1/3½	11½
Guilsborough	1/4	1/-
Halifax	1/5½	1/1½
Hanley	1/5½	1/1½
Harpenden	1/3	11½
Harrogate	1/5½	1/1½
Hartlepools	1/5½	1/1½
Harwich	1/3½	11½
Haslemere	1/2½	11
Hastings	1/3	11½
Hatfield	1/4½	1/0½
Haywards Heath	1/3	11½
Hednesford	1/5	1/0½
Hemel Hempstead	1/4	1/0
Henley	1/3½	11½
Hereford	1/3½*	11½
Herne Bay	1/3	11½
Hertford	1/4½	1/0½
Heysham	1/5½	1/1½
Hitchin	1/3½	11½
Hoddesdon	1/4½	1/0½
Holt	1/1½	10½
Horley	1/3	11½
Horsham	1/2½	11
Horwich	1/5½	1/1½
Huddersfield	1/5½	1/1½
Hull	1/5½	1/1½
Hunstanton	1/2	10½
Huntington	1/2½	11
Ilfracombe	1/3½	11½
Ingatestone	1/3	11½
Ipswich	1/4½	1/0½
Isle of Thanet	1/3	11½
Isle of Wight	1/2	10½
Keighley	1/5½	1/1½
Kenilworth	1/5½	1/1½
Kettering	1/4½	1/0½
Kidderminster	1/4½	1/0½
King's Lynn	1/3	11½
Kirkham	1/5½	1/1½
Knowle	1/5	1/0½
Lancaster	1/5½	1/1½
Leamington	1/5	1/0½
Leatherhead	1/4	1/-
Leeds	1/5½	1/1½
Leicester	1/5½	1/1½
Leighton Buzzard	1/2	10½
Letchworth	1/3½	11½
Lewes	1/2	10½
Lichfield	1/4½	1/0½
Lincoln	1/5½	1/1½
Littlehampton	1/3	11½
Liverpool	1/7‡	1/2½
Llandudno	1/4½	1/0½
Llanelly	1/5½	1/1½
London—		
12 m. radius	1/7*	1/2½
12-15 m. radius	1/6½*	1/2
Long Eaton	1/5½	1/1½
Longton	1/5½	1/1½
Loughborough	1/5½	1/1½
Louth	1/4	1/-
Lowestoft	1/3	11½
Luton	1/4	1/-
Macclesfield	1/5	1/0½
Maidenhead	1/4	1/-
Maidstone	1/3½	11½
Malvern	1/4	1/-
Manchester	1/5½	1/1½
Manningtree	1/2	10½
Mansfield	1/5½	1/1½
March	1/2	10½
Margate	1/3	11½
Market Harborough	1/4½	1/0½
Matlock	1/4	1/-
Melton Constable	1/1½	10½
Melton Mowbray	1/4½	1/0½
Merthyr Tydfil	1/5	1/0½
Middlesbrough	1/5½	1/1½
Middleton	1/5½	1/1½
Middlewich	1/4½	1/0½
Milford Haven	1/3½	11½
Morecambe	1/5½	1/1½
Morley	1/5½	1/1½
Mundesley	1/2	10½
Nantwich	1/4½	1/0½
Newark	1/4½	1/0½
Newbury	1/2½	11
Newcastle-on-Tyne	1/5½	1/1½
Newcastle-u-Lyme	1/5½	1/1½
New Forest	1/2½	11
Newmarket	1/3	11½
Newport, Mon.	1/5½	1/1½
Newport Pagnell	1/2½	11
Northampton	1/5½	1/1½
Norwich	1/5	1/0½
Nottingham	1/5½	1/1½
Nuneaton	1/5½	1/1½
Oakham	1/4	1/-
Oldham	1/5½	1/1½
Ormskirk	1/5½	1/1½
Oxford	1/4½	1/0½
Oxted	1/2½	11
Paignton	1/4½	1-0½
Peterborough	1/4½	1/0½
Plymouth	1/5½†	1/1½
Pontypridd	1/5	1/0½
Portsmouth	1/4½	1/0½
Port Talbot	1/5½	1/1½
Preston	1/5½	1/1½
Pulborough	1/2	10½
Ramsgate	1/3	11½
Reading	1/4½	1/0½
Redcar	1/5½	1/1½
Redditch	1/4½	1/0½
Redhill	1/3½	11½
Reigate	1/3½	11½
Retford	1/4	1/-
Ripon	1/4	1/-
Rochdale	1/5½	1/1½
Rochester	1/3½	11½
Rugby	1/5½	1/1½
Saffron Walden	1/2	10½
St. Albans	1/5	1/0½
St. Helens	1/5½	1/1½
St. Neots	1/2½	11
Salisbury	1/2½*	11
Salisbury Plain	1/2½*	11
Sawbridgeworth	1/3½	11½
Saxmundham	1/1½	10½
Scarborough	1/5	1/0½
Selby	1/5½	1/1½
Sevenoaks	1/3½	11½
Sheerness	1/3	11½
Sheffield	1/5½	1/1½
Shipley	1/5½	1/1½
Shoeburyness	1/4½	1/0½
Shoreham	1/4	1/-
Shrewsbury	1/4½	1/0½
Sittingbourne	1/2½	11
Skegness	1/4½	1/0½
Sleaford	1/4	1/-
Slough	1/4½	1/0½
Southampton	1/4½	1/0½
Southend-on-Sea	1/4½	1/0½
Southport	1/5½	1/1½
South Shields	1/5½	1/1½
Spalding	1/3	11½
Stafford	1/5	1/0½
Staines	1/4	1/-
Stamford	1/4	1/-
Stevenage	1/3½	11½
Stockport	1/5½	1/1½
Stockton-on-Tees	1/5½	1/1½
Stoke-on-Trent	1/5½	1/1½
Stourbridge	1/5	1/0½
Stourport	1/4½	1/0½
Stowmarket	1/2	10½
Stratford-on-Avon	1/4	1/-
Stroud	1/3½†	11½
Sunderland	1/5½	1/1½
Sutton Coldfield	1/5½	1/1½
Swaffham	1/1½	10½
Swanage	1/3½*	11½
Swansea	1/5½	1/1½
Swindon	1/4*	1/-
Tamworth	1/5	1/0½
Taunton	1/3½	11½
Tenterden	1/2½	11
Tewkesbury	1/4*	1/-
Thetford	1/2	10½
Thorpe Bay	1/4½	1/0½
Todmorden	1/5½	1/1½
Tonbridge	1/3½	11½
Torquay	1/5	1/0½
Totnes	1/3½†	11½
Trowbridge	1/2½*	11
Truro	1/2½	11
Tunbridge Wells	1/3½	11½
Uppingham	1/4	1/-
Uttoxeter	1/3½	11½
Wakefield	1/5½	1/1½
Walsall	1/5½	1/1½
Walsden	1/5½	1/1½
Walton-on-Naze	1/3½	11½
Ware	1/4½	1/0½
Warminster	1/2½*	11
Warrington	1/5½	1/1½
Warwick	1/5	1/0½
Wellingborough	1/4½	1/0½
Wells (Norfolk)	1/1½	10½
Welwyn	1/3	11½
Welwyn Gar. City	1/5½	1/1½
West Bromwich	1/5½	1/1½
Westcliff-on-Sea	1/4½	1/0½
Weston-super-Mare	1/4½	1/0½
Weybridge	1/4	1/-
Weymouth	1/3*	11½
Whitby	1/4½	1/0½
Whitstable	1/3	11½
Widnes	1/5½	1/1½
Wigan	1/5½	1/1½
Wigton	1/4	1/-
Wellington	1/5	1/0½
Wilmslow	1/5½	1/1½
Winchester	1/3½	11½
Windermere	1/3½	11½
Windsor	1/4½	1/0½
Wisbech	1/2	10½
Witham	1/3½	11½
Woking	1/3½	11½
Wokingham	1/3½	11½
Wolverhampton	1/5½	1/1½
Woodbridge	1/2	10½
Worcester	1/4½	1/0½
Workington	1/4	1/-
Worksop	1/4	1/-
Worthing	1/3	11½
Wrexham	1/5	1/0½
Wroxham	1/2½	11
Wycombe	1/4	1/-
Wymondham	1/1½	10½
Yeovil	1/3*	11½
York	1/5½	1/1½

* Painters, 1d. less than other Craftsmen. † Painters, ½d. less than other Craftsmen. ‡ Plasterers 1s. 8d.

For Building Trade Wages in Scotland, see page 874.

CONTRACTS OPEN

For some contracts still open, but not included in this List, see previous issue. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

MAY 19.

***Leyton.**—Painting.—And repairs to school buildings, for B.C. John H. Jacques, 61, West Hamlane, E.15. Dep. £1.

MAY 21.

Banbridge.—Houses.—13, and two shops in Dromore-st., for F. W. Crothers. D. W. Chambers, A.I.A.S., architect, Town Hall, Banbridge. Dep. £1 1s.

Dundee.—Works.—For Dens-rd. school, for E.C. City Quantity Surveyor, 21, City-sq.

Forden.—Alterations.—And repairs at Institution, for Montgomery C.C. Public Assistance Dept., County Offices, Welshpool. Dep. £2 2s.

Harristown, Co. Meath.—House.—For Irish Land Commission. M. Deegan, secretary, Upper Merrion-st., Dublin. Dep. £1.

Harwich.—Painting.—Corporate property, for T.C. F. H. French, B.E.

Leatherhead.—Conveniences.—At Ashtead and Bookham recreation grounds, for U.D.C. E. and S. Dep. £1.

Limerick.—Houses.—16, at Westfields, for Utility Society. O'Grady & Sellers, engineers and architects, Clare-chambs. Dep. £5.

Oldham.—Bathroom.—And installation of baths, also heating service, at Central Fire Station, for T.C. B.E. and S. Dep. £1 1s.

Perth.—Houses.—214, at Crieff-rd., in various trades, for T.C. Thomas M'Laren, B.S., 16, Tay-st. Dep. £1.

Peterborough. — Painting. — And decorating several Council schools, for E.C. J. L. Jolly, Deputy City S.

Portsmouth. — Installation. — Heating installations at the new central depot, Eastern-rd., for T.C. City E. Dep. £1 1s.

Walsall.—Extensions.—To nurses' home at the Manor Hospital, Pleck-rd., for T.C. B.E. Dep. £3 3s.

Winchester.—Painting.—At Victoria hospital, Alresford-rd., for T.C. City E.

MAY 22.

Ballater.—Houses.—Four, in Deebank-rd., in various trades, for Chas. Paterson Trust. Tawse & Allan, civil engineers and architects, 10, Bon-Accord-sq., Aberdeen.

Bromley.—Redecoration.—And repairs to dwellings at Council's housing estates, for T.C. Property Manager, Estate Office, Holbrook-way.

Hailsham.—Convenience.—At Pevensey Bay, for R.D.C. W. O. Humphery, E. and S. Dep. £1 10s.

Hitchin.—Construction.—Of brick boiler chimney at Water Works, Queen-st., for U.D.C. W. Phillips, E., Gas Company's Office, Luton, Beds. Dep. £2 2s.

Kenley.—Fixing.—5 sets of steel revolving shuttering, also roofing tiles, at Council's Highway Depot, for Couledon and Purley U.D.C. S.

Maidstone. — Alterations. — And additions at Borough Accountant's Offices, 13, Tonbridge-rd., for T.C. T. F. Bunting, B.S., Palace-av.

Plymouth.—Painting.—Part of premises at Blackadon mental hospital, for T.C. City Architect, Rowe-st.

Pontypool.—Alterations.—To children's ward at hospital. Lougher & Co., architects, Bank-chams.

Rhondda.—School.—At Ynyscynon, Trealaw, for U.D.C. E. Taylor, E. and S. Dep. £2 2s.

Selby.—Houses.—52, for U.D.C. S., 5, New-lane. Dep. £1 1s.

Strabane.—Painting.—And decoration at North West Agricultural School, Strabane, for Ministry of Finance. Secretary, Ministry of Finance, May-st., Belfast.

Sunbury-on-Thames.—Painting.—Of Council offices and open-air swimming pool, for U.D.C. A. J. Buttress, Acting S.

Tanfield.—Bungalows.—20, for U.D.C. J. R. Heslop, architect, Tantobie S.O., Newcastle-on-Tyne.

***Wandsworth.**—Demolition.—Of properties on the site of the proposed new municipal buildings, for B.C. Edward A. Hunt, architect, Brettenham House, Strand, W.C.2. Dep. £2 2s.

MAY 23.

Ampthill.—Houses.—16, on various sites, for R.D.C. Leonard Foster, S. Dep. £1 1s.

Ballymena.—Plumbing Installation.—At model P.E. school, for Regional E.C. James Scott, architect and civil engineer, 11, Fountain-st., Belfast.

Chichester.—33 houses.—At Joy's Croft, Adelaide-rd. and St. Pancras, Chichester, for T.C. Dep. £1. Mr. F. C. Nash, City Sanitary Inspector.

Darlington.—Houses.—8, at Heighington, for R.D.C. H. E. Jarvis, architect, 44, High-row. Dep. £2 2s.

Deben.—Cottages.—Two, at Bredfield, for R.D.C. C. G. Kell, clerk, Woodbridge. Dep. £2 2s.

Dublin.—Alterations.—To ward at Rialto consumptive hospital, for Board of Assistance. J. William O'Sullivan, 102-3, Grafton-st.

Eastry.—Houses.—19, for R.D.C. F. A. Cloke, clerk, 51, Strand-st., Sandwich. Dep. £2 2s.

Leix.—School.—At Ballylynan, Leix, for Very Rev. J. Killian, P.P. P. J. Foley, B.E., architect and civil engineer, 32, Lower Abbey,st., Dublin. Dep. £5.

Liverpool. — Dwellings. — 60 tenement in Wilbraham-st., for T.C. Director of Housing, Municipal Annexe, Dale-st. Dep. £1 1s.

Liverpool. — Dwellings. — 60 tenement in Wil- T.C. Director of Housing, Dale-st. Dep. £1 1s.

London.—Floor.—Removable hardwood spring floor, with trestling, in swimming bath at Council's Public Baths, Caledonian-rd., N.1, for Islington B.C. B.E.

London.—Erection.—Disinfestation station at Council's Wood-lane depot, for Kensington B.C. B.E. and S.

Methley.—Houses.—8, at Methley Junction, for U.D.C. J. Belford, S., Red House. Dep. £1 1s.

***Pill.**—28 Houses.—For Long Ashton R.D.C. Messrs. Maynard, Froud, Stevens, chartered architects, St. Stephen's-chmbrs., Baldwin, Bristol. Dep. £2 2s.

Plymouth. — Garage. — At Plymouth Station Sorting Office, for H.M.O.W. Room 65d, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

South Molton.—Painting.—External, of 70 houses on various sites, for R.D.C. S., Mill-rd.

South Molton.—Houses.—4, at Oakford site, North Molton, for R.D.C. C. N. B. Willey, clerk, 7, East-st. Dep. £2 2s.

***Wembley.**—Public Convenience.—In Lancelot-rd., for U.D.C. Cecil S. Trapp, E. and S. Dep. £2 2s.

MAY 24.

***Brownhills.**—Houses.—76, for U.D.C. Clerk. Dep. £1.

Cheadle.—Decoration.—Of 94 houses on various sites, for R.D.C. A. P. Hancock, M.Inst.M. and Cy.E., S.

Glasgow.—Houses.—18, at Coplawhill, for T.C. D. Stenhouse, T.C.

Glasgow.—Painter Work.—At schools, for Education Dept. D. Stenhouse, T.C.

2000 TONS MARBLE MASS PRODUCTION PRICES

JOHN STUBBS & SONS
LONDON LIVERPOOL

Great Britain.—Painting.—For painting certain lighthouses around the coasts of England and Wales. Secretary, Trinity House, Tower Hill, London, E.C.3.

Hetton.—Bungalows.—72, at Hetton-le-Hole, and also for roads and sewers in connection with same, for U.D.C. Albert H. Fennell, L.R.I.B.A., architect, Bridge End-chmbrs., Chester-le-Street.

Highgate.—Electricity Sub-station.—At Langdon Park-rd., for Borough of Hornsey. W. H. Adams, B.E. and S.

Hull.—School.—At Ainthorpe-grove, for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep £1 1s.

***Kingston-upon-Thames.**—Remodelling.—Of the chemical laboratory at the Grammar School, London-rd., for Corporation. Borough Surveyor. Dep. £1 1s.

Lack.—Alterations.—And improvements at P.E. school, for County Fermanagh Regional E.C. John J. Maguire, secretary, Courthouse, Enniskillen. Dep. £2 2s

Leeds.—Staircases.—Fire escape staircases at Children's Homes, Wood-lane, Rothwell, for T.C. H. Fieldhouse, Public Assistance Officer.

Liverpool.—Employment Exchange.—For H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Ossett.—Painting.—And decorating, at Grammar School. E. Lucas, clerk, Education Department, Croft House.

Sunderland.—Painting.—Education institutions, for E.C. Education Offices, 15, John-st.

MAY 25.

Cannock.—Decorating Work.—At Council offices, "Halingdene," Penkridge, for R.D.C. Lt.-Col. H. M. Whitehead, S., Crown Bridge, Penkridge.

Derby. — Erection. — Of police courts and offices, for C.B. Town Clerk's Office, Market-place Dep. £2 2s.

Greenock.—Alterations.—To loading bank at head post office, for H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh. Dep. £1 1s.

Heckmondwike.—Works.—At Grammar School, for Governors. H. C. Hebbes, clerk.

Kenmare.—Reconstruction.—Of Boys' National school, Co. Kerry, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1.

***Kingston-upon-Thames.** — Erection. — Of additional class room to Grammar School, London-rd., for Corporation. Borough Surveyor. Dep. £1 1s.

London, W.C.2. — Painting. — External and internal, at Public Trustee Office, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, S.W.1. Dep. £1.

Stourbridge.—Library.—At Lye, for T.C. Fredk. Woodward, B.S. Dep. £3 3s.

Tottenham.—Erection.—Of office building, workmen's dining-room and a garden shelter, at Tottenham Cemetery. J. C. S. Mummery, architect, Church-lane, N.17.

Truro.—Bungalow.—At Tregolls-rd. A. J. Cornelius, F.R.I.B.A., Truro.

Windermere.—Residence.—For Miss Hay. J. F. Curwen & Son, F.R.I.B.A., Highgate, Kendal.

MAY 26.

***Basingstoke.**—Demolishing.—Existing buildings and erecting shops and offices, etc., in Church-st., for Corporation. Meirian O. Jones, T.C. Dep. £2 2s.

Bebington.—Welfare Centre.—At New Ferry Park, New Ferry, for U.D.C. E. and S. Dep. £2 2s.

Belfast.—Residence.—For Rev. Brother Superior, De La Salle Brothers, Willowbank, Falls-rd., Belfast. McCarthy & Lilburn, chartered surveyors, Scottish Provident-bldgs. Dep. £2 2s.

Belfast.—Cinema.—At Crumlin-rd. for Savoy Picture House, Ltd. M'Carthy & Lilburn, surveyors, Scottish Provident-bldgs. Dep. £2 2s.

Blackpool.—Tram Shed.—At Rigby-rd. Depot, for T.C. B.S.

Brighouse.—Painting.—Exterior of chapels, cemetery, Registrar's house, greenhouses, railings, at Brighouse Cemetery; and exterior of "Glenthorne," High-st.; also exterior of Fire Superintendent's house, Rydings Park; for T.C. B.E.

Ecclesfield.—Internal Renovation.—Of Grammar School, for West Riding C.C. A. Rayner, 151, Cross Hill.

Lerwick.—Building.—At Central public school, for Zetland C.C. P. Thompson, architect, Fort-rd.

Newtown St. Boswells.—Additions.—To County Offices, for Roxburgh C.C. G. J. Sherriff, County Clerk, Newtown St. Boswells.

Norwich.—16 Flats and 18 Houses.—On various estates, for T.C. Architectural Dept., City Engineer's Office. Dep. £2.

Worcester Park, Surrey.—Houses.—68, for Sutton and Cheam U.D.C. Wm. Hedley Grieves, surveyor, Sutton. Dep. £2 2s.

MAY 28.

Abingdon.—Houses.—94, on Drayton-rd. estate, for T.C. B.S., The Abbey House. Dep. £2 2s.

Birkenhead.—Demolition.—Of brick and stone chimney stack, at Flaybrick Hill Waterworks, for T.C. Water E., 601, Borough-rd.

Blackpool.—Heating.—Of extension at Highfield School, for T.C. B.S.

Crediton.—Erection.—Of school and alterations to existing buildings at Queen Elizabeth's grammar school, for Devon C.C. County Architect, 97, Heavitree-rd., Exeter. Dep. £1 1s.

Cupar.—Installation.—Of electric light and power to houses and farm steading at Springfield Farm, for Fife District Asylum. Medical Superintendent, Fife District Asylum.

Edinburgh.—Dermatology.—And special pavilion; also alterations to west entrance gates, at Royal Infirmary, Henry Maw, secretary and treasurer.

Finchley.—Decorations.—At schools, for T.C. P. T. Harrison, B.E., 9, The Hawthorns, Regent's Park-rd., Finchley, N.3. Dep. £1 1s.

Halesowen.—Houses.—30, at Nawne-lane, for U.D.C. G. Spurr, S. Dep. £2 2s.

Hemsworth.—Mining Centre.—For West Riding C.C. Education Officer, County Hall, Wakefield.

Huyton-with-Roby. — Houses. — 34, on Huyton Quarry estate, for U.D.C. S. Dep. £2 2s.

Isle of Wight.—Alterations.—To Havenstreet Council schoolhouse, for E.C. S. R. Cocks, S., St. Thomas-st., Ryde.

Liverpool.—Internal Painting.—At certain elementary schools, for T.C. Land Steward and Surveyor, Dep. £1 1s.

London. — Repainting. — Westminster Bridge, for L.C.C. Chief Engineer (B.), County Hall, S.E.1, Dep. £1.

Morley.—Installation.—Of electric lighting at cemetery registrar's house in Bruntcliffe-lane, for T.C. F. Turner, B.E. and S.

Morley.—Redecoration.—Of rooms, etc., in Town Hall, for General Purposes Committee. F. Turner, B.E. and S.

Oxted.—Cottages.—12 non-parlour type at Mill-lane, for R.D.C. of Godstone. Stanley Easter, surveyor, Lloyds Bank-chambs., Station-rd. West, Oxted. Dep. £2 2s.

Penzance.—Houses.—72, on Penalverne housing site, also construction of roads, sewers and water supply mains, for T.C. E. W. J. Nicholson, T.C Dep. £5 5s.

Port Talbot.—Houses.—Eight four-bedroom type and 16 three-bedroom type houses at Cwmavon, and roads and sewers, for T.C. B.E. Dep. £2 2s. each.

Portsmouth.—Erection.—Of boiler-house block, etc., at City Mental Hospital. E. H. Harvey, architect, 110, Commercial-rd. Dep. £3 3s.

Preston. — Painting. — Administration block, scarlet fever and diphtheria wards of hospital in Fulwood Hall-lane, Fulwood, for Preston, Fulwood and Longridge Joint Hospital. M. Lutener, Clerk to Committee.

***Scarborough.**—Houses.—58 parlour and 52 non-parlour, on the Prospect Mount Estate, for T.C. J. Paton Watson, B. and Water E.. Dep. £2 2s.

Stratford-upon-Avon.—Erection.—Of steel-framed buildings and purifiers, for T.C. F. Shewring, engineer and manager, Gas Works, Birmingham-rd.

Sutton-in-Ashfield.—Fencing.—For U.D.C. Walter Burn, S.

Tonbridge.—Painting.—Of 177 houses in various parts of district, for R.D.C. Frank Harris, E. and S. Dep. £1 1s.

Wakefield.—Alterations.—To Town Hall, for T.C. L. Ives, City S.

***West Ham.**—Repairs.—And painting of interiors of 8 schools in district. Also repairs and painting of exterior Fyfield Residential Open-air School, near Ongar, Essex, for C.B. J. H. Jacques, architect, 61, West Ham-lane, E.15. Dep. £1.

MAY 29.

Ashby Woulds.—Houses.—48 non-parlour type, for U.D.C. McCarthy. Collings & Co., architects, Central-chambrs., Coalville. Dep. £3 3s.

***Bootle.**—Construction.—Erection and completion of structural alterations at Central police station, Oriel-rd., for Corporation. B.E. Dep. £1.

Carlisle. — Garage. — Erection of, at Carlisle Post Office and Telephone Exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, S.W.1. Dep. £1.

Darlington.—Alterations.—And additions to casual wards and heating system at institution, Yarm-rd., for T.C. Ernest Minors, B.S. Dep. £1 1s.

Dunfermline.—Houses.—26, at Robertson-rd., Bellyeoman, for T.C. D. H. Shaw, B.E. Dep. £1 1s.

Godstone.—Redecorations.—Of 94 Council houses, for R.D.C. Stanley Easter, S. Dep. £1 1s.

Lytham St. Annes.—Classrooms.—At Queen Mary school, Fairhaven, for Governors of the Lytham Schools Foundation. Francis L. Lumb, F.R.I.B.A., 19, Clifton-st., Blackpool. Dep. £2 2s.

Minety.—Reconstruction.—Of three cottages in Moor, for Council. E. E. Taylor, clerk, Minety, Wilts.

Preston.—Offices.—For T.C. W. Platt, B.E. and S. Dep. £2 2s.

Salford.—Painting.—And decorating, at Weaste and Northern cemeteries, for T.C. City E.

MAY 30.

Birkenhead.—Repairs.—To property, for C.B. E. W. Tame, T.C.

Blyth.—Houses.—52, in Crawford-st. and rear of Hodgson's-rd., for T.C. L. Leeper, B.E. Dep. £5 5s.

***Eccles.**—Erection.—Of employment exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Huddersfield. — Houses. — 124, on Cross-lane housing site, Newsome, for T.C. B.E. Dep. £1 1s.

Liverpool.—Houses.—38, adjoining School-lane, Woolton, for T.C. Director of Housing, Dale-st. Dep. £1 1s.

***Liverpool.**—Houses.—237, on Finch House Estate, for Corporation. Walter Moon, T.C. Dep. £1 1s.

***Liverpool.**—Houses.—241, on Finch House Estate, for Corporation. Walter Moon, T.C. Dep. £1 1s.

***Liverpool.**—Houses.—259, on Finch House Estate, for Corporation. Walter Moon, T.C. Dep. £1 1s.

Newbury.—Redecorating.—14 class- and 4 staff-rooms at senior Council school, Station-rd., for E.C. B.S.

Salford.—Painting.—And decorating at Weaste and Northern cemeteries, for T.C. City E.

Southampton. — Villas. — Two new villas and alterations to existing mansion at Tatchbury Mount Colony, near Totton, for Hampshire Joint Mental Health Institution's Committee. J. M. Sheppard & Partners, 38, Bedford-place, London, W.C.1. Dep. £5 5s.

MAY 31.

Armagh.—Painting and Repairs.—To 7 schools, for County E.C. Secretary, Education Committee. Court House, Armagh.

Bedworth.—Office.—And ambulance station, for U.D.C. H. W. Crowther-Green, E. and S. Dep. £1 1s.

Camberley.—Houses.—26, at Barossa, for Frimley and Camberley U.D.C. R. H. Porteous, E. and S. Dep. £2 2s.

Dartford.—Sub-station.—At rear of public library, for T.C. B.S.

***Exeter.**—Extensions.—Of station sorting office garage, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Herne Bay. — Post Office. — Erection of, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, S.W.1. Dep. £1.

Mexborough.—Erection.—Of brick wall, at Garden-st. council school, for West Riding C.C. W. H. Jones, Divisional Clerk, Mexborough.

Orpington.—Painting.—External, of 173 houses, in various parts of district, for U.D.C. R. A. Pope, Building Surveyor.

Rochdale.—Installation.—Electric lighting and power installations to 212 houses on Brimrod estate, for C.B. B.S.

Southend-on-Sea.—Cleaning.—And painting, at various schools, for T.C. F. W. Smith, A.R.I.B.A., Municipal-bldgs. Dep. £1.

Warrington.—Painting.—At Cottage Homes and Public Assistance Offices, for T.C. B.S.

York.—Flats.—176 houses and 44 flats on Huntington-rd. estate, for T.C. F. W. Spurr, City E. Dep. £2 2s.

JUNE 1.

Anglesey.—Painting.—Of various schools, for C.C. Clerk of Works, Education Offices, Llangefni.

Castleford.—Painting.—And decorating at Grammar School. C. T. Lightley, clerk, 77, Carlton-st.

***Slough.**—Erection.—Of timber-framed pavilion, for U.D.C. Alan Bromly, E. and S., William-st.

JUNE 2.

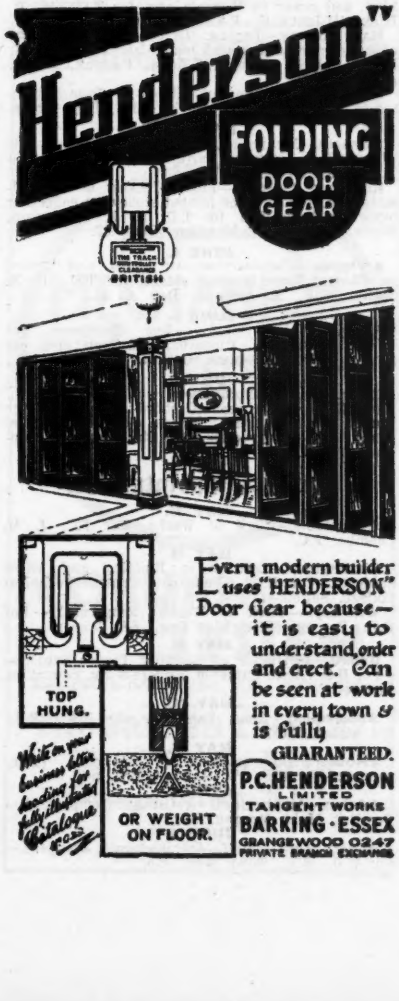
Durham.—Houses.—35, and roads and sewers at Ludworth, for R.D.C. Housing Architect. Dep. £1 1s.

Mallow.—Hospital.—New County hospital, for North Cork County Board of Public Assistance. D. C. Murphy, Secretary, Mallow. Dep. £20.

South Charnwood.—School.—For Leicestershire C.C. Architect, County Education Office, Grey Friars, Leicester. Dep. £2 2s.

JUNE 4.

Brierley Hill.—Houses.—8, also drains, fencing and footpaths, at Addison-rd., for U.D.C. R. H. J. Comber, S. Dep. £2 2s.



Doncaster.—Shelters.—At Westfield Park and Hexthorpe Flatts, for T.C. R. E. Ford, Estates Surveyor.

Dublin.—Flat.—At Chancery-pl., for T.C. City Treasurer, Exchange-bldgs., Lord Edward-st. Dep. £5 5s.

***Ealing.**—Erection.—Of Wood End and Horsenden schools, for B.C. W. R. Hicks, B.E. Dep. £6 6s.

***Windsor.**—Houses.—66, on Church Farm estate, for T.C. F. N. McRae, B.E., 16, Alma-rd. Dep. £1 1s.

JUNE 5.

Ardsley.—Houses.—24, on Blackgates housing estate, for U.D.C. F. Arthur Brown, S. Dep. £1 1s.

Donabate, Co. Dublin.—Overhaul.—Of electrical installation at Portrane Mental Hospital. J. P. Tierney & Co., consulting engineers, 44, Kildare-st., Dublin. Dep. £5 5s.

Donabate, Co. Dublin.—Overhaul.—Of hot water installation at Portrane Mental Hospital. J. P. Tierney & Co., consulting engineers, 44, Kildare-st., Dublin. Dep. £5 5s.

Romford. — Additional Floor. — Erection of, to "C" block at Institution, for Essex C.C. J. Stuart, County Architect, Chelmsford. Dep. £2 2s.

JUNE 6.

Colwyn Bay.—Erection.—Of boundary walls and railings and gates enclosing part of Mochdre recreation ground, for U.D.C. W. J. Dunning, E. and S.

Durham.—Houses.—100, sewers, concrete roads and incidental work in connection therewith, at Sherburn-rd., New Durham, for T.C. John W. Green, City E. and S. Dep. £5 5s.

JUNE 7.

Strabane.—Houses.—28, for U.D.C. Vincent H. Murnaghan, Town S.

***Walthamstow.**—Interior.—And exterior renovation, limewhiting, etc., to various schools, for B.C. T. S. Cunningham, B.E. and S., E.17.

JUNE 8.

Brighouse.—Painting.—Secondary school for girls. J. S. Hird, Clerk to Governors.

JUNE 9.

Brighouse.—Decoration.—Of St. Andrew's infants' school, Lightcliffe-rd., and Longroyde school, Longroyde-rd., for T.C. Director of Education, Education Offices.

Builth Wells.—Houses.—8, off Tanhouse-rd., for U.D.C. Henry Waters, architect and surveyor, Beaufort. Dep. £3 3s.

Guildford.—Decorations.—Repairs, etc., to schools, for T.C. B.S.

JUNE 11.

Chesterfield.—Painting.—And Decorating internally and externally of various schools, for T.C. Wilcockson & Cutts, architects, 12, Saltergate. Dep. £5 5s.

JUNE 25.

***Acton.**—Repairs.—To heating installation, at various schools, for E.C. B.E., Municipal Offices. Dep. £1 1s.

***Acton.**—Cleaning, Painting, etc.—To various schools, for E.C. B.E., Municipal Offices. Dep. £1 1s.

NO DATE.

Batley.—Installation.—Of electric lighting at 3 schools, and painting and/or colour washing of 2 schools. Education Office.

Darrington.—Residence.—Off Great North-rd., for W. T. Cliffe. Pennington, Hustler & Taylor, architects and surveyors, Pontefract.

Knottingley. — Houses. — At Ferrybridge-rd. J. G. L. Poulson, architect and surveyor, 25, Ropergate, Pontefract.

Lincoln. — Painting. — Interior of hospital, for County Hospital. Arthur Moore, Secretary-Superintendent.

Llanbrynmair.—Decorating.—And installation of heating and electric lighting. , Chas. E. Ellis, L.R.I.B.A., Aberdovey.

London.—Renovations.—Of Radical Club premises, Plumstead. Secretary.

Midsomer Norton.—Science Block.—And alterations to existing buildings at County School, for Somerset C.C. A. J. Toomer, County Architect, Park-st., Taunton. Dep. £2 2s.

St. Helens.—Hall.—In Knowsley-rd. Biram & Fletcher, FF.R.I.B.A., 17, George-st. Dep. £1 1s.

Weston-super-Mare.—Extensions.—To plumber's and electrician's dept., School of Science and Art, for Somerset C.C. A. J. Toomer, County Architect, Park st., Taunton.

MATERIALS, etc.

MAY 21.

Ayr.—Tar.—For C.C. J. E. Shaw, County Clerk, Supplies Department, Ayr.

Sleaford.—Paving Flags and Kerbs.—For U.D.C. G. B. Hempstead, clerk.

MAY 22.

Rayleigh.—Cement.—For U.D.C. Fred. A. James, P.A.S.I., E. and S.

MAY 23.

Wanstead and Woodford.—Highway Materials.—For U.D.C. A. D. Ward, S.

MAY 25.

Carlisle. — Paint. — For T.C. J. B. Blundell, M.Inst.C.E., E. and Manager, Rome-st. Gas Works.

Folkestone.—Granite Flat Kerb.—For T.C. E. L. Allman, B.E.

MAY 28.

Farnborough.—Tarred Slag.—For U.D.C. H. F. Yeomans, Acting E. and S.

MAY 31.

Aldridge.—Road Materials.—For U.D.C. H. S. Onions, E. and S.

ENGINEERING, IRON AND STEEL.

MAY 21.

Port Talbot.—Alterations.—And repairs to embankment and byewash at Cwmwernderi and Ynye-y-Gwas Reservoirs, for T.C. B.E. Dep. £5.

Preston.—Repairs.—Replacement of large timber tidal gates at Cocker Bridge, Cockerham, for River Lune Catchment Board. R. W. Eaton, E., 1, Jordan-st., Preston. Dep. £2 2s.

MAY 23.

Ireland.—Steelwork.—140 tons, for bridge renewal, for Great Southern Railways. A. W. Bretland, Chief E., Westland Row Station, Dublin. Dep. £2 2s.

Stromness, Orkney.—Extension.—Of pier, for Commissioners of Northern Lighthouses. D. A. Stevenson, M.Inst.C.E., E., 84, George-st., Edinburgh. Dep. £5 5s.

MAY 24.

Heston and Isleworth.—Purification Works.—To form part of the proposed Mogden Purification Works (Contract M.4.), for Middlesex C.C. Dodd & Watson, 3, Central-bldgs., Westminster, S.W.1. Dep. £5 5s.

MAY 25.

Bromley.—Culverting.—Length of River Quaggy and levelling, paving and channelling, and making good in New Street-hill (part), for T.C. B.E. Dep. £2 2s.

Cardiff.—Banks.—1,500 lin. yds. more or less of tidal banks, approximately 4 ft. 6 in. in height, also a brook diversion of 330 lin. yds. more or less, together with contingent works, for T.C. City E.

MAY 26.

Carmarthenshire.—Construction.—Of Dryslwyn bridge over River Towy, for C.C. T. W. Wishlade, C.S. Dep. £5.

West Suffolk.—Reconstruction.—Of Hall Bridge and Clock House Bridge, Shimpling, for C.C. E. H. Bond, C.S., Bury St. Edmunds.

MAY 27.

Northamptonshire.—Bridge.—At Irthlingborough, for C.C. E. A. Black, C.S., Northampton.

MAY 28.

Alnwick.—Reservoir.—Covered reservoir of reinforced concrete at Shilbottle Woodhouse, for R.D.C. R. Rothwell, clerk, 28, Bondgate Within.

Cannock.—Sewer.—367 lin. yds. of 21-in., 18-in. and 15-in. dia. lapwelded steel pipe foul water sewer across fields, etc., at East Cannock, and other works, for U.D.C. Robert Blanchard, E. and S. Dep. £2.

Reigate.—Drainage.—Contract No. 4, for T.C. G. B. Kershaw & Kaufman, chartered civil engineers, 9, Victoria-st., S.W.1. Dep. £10.

MAY 29.

Cheshire.—Widening.—Of Otterspool Bridge carrying Romiley-Marple-rd. over River Goyt, for C.C. Geo. E. Ashforth, C.S., The Castle, Chester. Dep. £10 10s.

Hoddesdon.—Extensions.—To sewage disposal works, for U.D.C. D. Balfour & Sons, civil engineers, 47, Victoria-st., Westminster, S.W.1. Dep. £3.

ROAD, SEWERAGE AND WATER WORKS.

MAY 22.

Hythe.—Construction.—Of Cliff-rd. and Lynton-rd., for T.C. M. J. Harvey, B.S. Dep. £3 3s.

Peterborough.—Mains.—Laying of cast-iron water mains, for T.C. W. H. A. Court, City E. and S. Dep. £2 2s.

Rayleigh.—Sewer.—In Helena-rd. and Victoria-rd. (unmade private streets), for U.D.C. Fred. A. James, P.A.S.I., S. Dep. £1 1s.

Sleaford.—Sewer.—From North-rd. to sewage farm, about 2,000 yds., for U.D.C. S. F. Clare, Jermyn-st. Dep. £2 2s.

Stone.—Main.—Laying 144 yds. of 3-in. cast-iron water main, for U.D.C. W. W. R. Harlow, S.

Waltham Holy Cross.—Reconstruction.—Of sewers in High Bridge-st., for U.D.C. H. J. Chapman, clerk.

MAY 23.

Herne Bay.—Sewering.—And making-up of Bognor-drive, for U.D.C. B. J. Wormleighton, F.S.I., E. and S.

Kingston-upon-Hull.—Road Works.—At Saltings-lane, for T.C. Herbert Hamer, City Engineer. Dep. £2.

Oldham.—Street Works.—In certain streets and passages, for T.C. B.E. and S. Dep. £1 1s.

Prestwich.—Making-up.—Of Jesmond-av. and Arlington-av., for U.D.C. Handel Kay, E. and S. Dep. £2 2s.

Prestwich.—Making-up.—Of Woodhill-drive, for U.D.C. Handel Kay, E. and S. Dep. £2 2s.

Ramsbottom.—Surface Dressing.—About 160,000 sq. yds. of roads, for U.D.C. A. Plunkett, S.

Wells.—Construction.—Of sewers at eastern end of town, for T.C. City S., 1, Cathedral-green.

Willesden.—Asphalt.—And tarpaving repairing works at various schools during the school summer holidays, for E.C. F. Wilkinson, architect, Town Hall, Kilburn, N.W.6.

MAY 24.

Fareham.—Making-up.—Western, Queen's and Deans-pk. roads, for U.D.C. E. and S. Dep. £2 2s

Harpenden.—Making-up.—Fairmead-av. and Top-street-way, for U.D.C. W. H. Johnson, S. Dep. £2.

Neston.—Making-up.—Of Earle-drive, for U.D.C. Arthur Tillotson, S. Dep. £1 1s.

MAY 25.

Rotherham.—Sewers, etc.—In Worksop-rd., adjoining Park-hill housing estate; connecting mains in Worksop-rd. and Chesterfield-rd., Swallownest, Aston, and Mansfield-rd. to Lodge-lane, Aston, for R.D.C. A. E. Lant, E. and S. Dep. £1 1s. each.

MAY 26.

Loughborough.—Sewer.—Double-lined stoneware pipe sewer in Rendell-st., for T.C. W. Grainger, B.S. Dep. £2 2s.

Radcliffe.—Concrete Surfacing.—Of Meller-st., for U.D.C. S.

MAY 28.

Beddington and Wallington.—Making-up.—At Wandle Court-gdns., Beddington, for U.D.C. S. F. R. Carter, E. and S. Dep. £1 1s.

Chingford.—Making-up.—Larkshall-rd., for U.D.C. S. J. Hellier, E. and S. Dep. £2 2s.

Finchley.—Construction.—Of concrete road and sewers at housing scheme No. 6, for B.C. Percival T. Harrison, M.Inst.C.E., B.E. and S., 9, The Hawthorns, Regent's Park-rd., N.3. Dep. £5.

Finchley.—Road Improvements.—To Summers-lane, between Upway and Woodhouse-rd., for B.C. Percival T. Harrison, M.Inst.C.E., B.E. and S., 9, The Hawthorns, Regent's Park-rd., N.3. Dep. £5.

Hendon.—Making-up.—Of Wildwood-rd. (second part), Colin-cres., Colin-gdns., Crossway, for T.C. A. O. Knight, B.E. and S. Dep. £4.

Ilford.—Making-up.—And paving of various roads in district, for B.C. B.E. and S. Dep. £2 2s.

London.—Paving.—Maydwell-st., Millais-st. and Holmby-st., for Camberwell B.C. William Bell, B.E. and S.

The Maidens and Coombe.—Making-up.—Of Clarence-av. (part), for U.D.C. E. and S. Dep. £2 2s.

Manchester.—Sewering.—Draining, paving and flagging of various roads, for T.C. District Surveyor, Town Hall. Dep. £1 1s.

Margate.—Main.—With hydrants and fittings, to Council houses at Bekesbourne, near Aerodrome, for T.C. E. A. Borg, B.E. and S., 40, Grosvenor-pl.

Royton.—Roads.—And sewer work at Hall-st. housing site, for U.D.C. L. Cookson, A.M.Inst. C.E., E. and S. Dep. £2 2s.

Southgate.—Drainage.—Of Cockfosters area, for T.C. R. Phillips, S. Dep. £5.

Spalding.—Mains.—16,065 yds. of 3-in. and 635 yds. of 2-in. dia. cast-iron water mains, together with air valves, sluice valves and hydrants, in parishes of Quadring, Gosberton, Surfleet and Weston, for R.D.C. Silcock & Simpson, engineers, 25, Victoria-st., Westminster, S.W.1. Dep. £5.

Stafford.—Reconstruction.—Of Gaolgate-st. and Greengate-st., for T.C. W. Plant, M.Inst.C.E., B.E. Dep. £2 2s.

MAY 29.

Birmingham.—Construction.—Of road, for H. & R. (Developments), Ltd. A. L. Vaughan, surveyor, Shakespeare Manor Estate, Stratford-rd., Shirley, Birmingham. Dep. £2 2s.

Great Ouseburn.—Sewerage, etc.—In parishes of Boroughbridge and Aldborough, for R.D.C. Silcock & Simpson, engineers, 10, Park-row, Leeds, 1. Dep. £5.

Kingston.—Mains.—For By-pass, for M.W.B. G. F. Stringer, clerk, 173, Rosebery-av., E.C.1. Dep. £10.

Wigan.—Reconstruction.—Of sewers, Goose Green, Pemberton, for C.B. W. Albert Walker, B.E. Dep. £3 3s.

MAY 30.

Ealing.—Reconstruction.—Of soil sewer at Bayham-rd. and Connaught-passage, West Ealing, and 12-in. soil sewer in Perivale-lane, for T.C. W. R. Hicks, M.Inst.C.E., F.S.I., B.E.

Nant Conway.—Laying.—Of 600 lin. yds. of 9-in. concrete pipe sewers with manholes, for R.D.C. J. Porter, clerk, Council Offices, Conway. Dep. £2 2s.

Sunderland.—Making-up.—Helen-st. from Atkinson-rd. to Browne-rd., for C.B. B.E. Dep. £2 2s.

MAY 31.

Lambeth.—Making-up.—And paving of Ivymount-rd., for B.C. Osmond Cattlin, M.Inst.C.E., F.S.I., B.E. Dep. £1 1s.

Richmond (Surrey).—Pipes.—Laying of approximately 400 yds. of open-jointed stoneware collecting pipes for Ham Well, for T.C. H. P. Williamson, Water Engineer and Manager. Dep. £2.

JUNE 4.

***Windsor.**—Construction.—Of roads and sewers on Church Farm housing estate, for T.C. F. N. McRae, B.E., 16, Alma-rd. Dep. £1 1s.

JUNE 5.

Lleyn.—Water Supply.—For Aberdaron, for R.D.C. Stanley L. Richards, chartered civil engineer, 5, Dumfries-place, Cardiff. Dep. £2 2s.

JUNE 6.

Esher.—Road.—Improvement works at Esher-rd., East Molesey, between Orchard-lane and River Ember, for U.D.C. F. Edwards, clerk. Dep. £3 3s.

Mitcham.—Construction.—Of Church-pl. in concrete, for U.D.C. S.

Public Appointments.

MAY 21.

***Dunstable.**—Clerk of Works.—For T.C.—J. M. Coombs, T.C.

MAY 23.

Birmingham.—Lecturer in Building and Allied Subjects.—For E.C. Principal, Central Technical College, Suffolk-st.

Wallasey.—Clerk of Works (temporary).—For C.B. Borough Electrical Eng., Sea View-rd.

MAY 26.

Oxford.—Instructor of Building Trades Subjects.—For E.C. A. C. Cameron, Secretary for Education, George-st.

MAY 28.

***Shoreditch.**—Road Foreman.—oFr B.C. B.S., Old Street, E.C.1.

MAY 31.

***Huddersfield.**—Architectural Assistant (Temporary).—For C.B. W. Jaggar, B.E. and S.

JUNE 1.

***Acton.**—Architectural Assistant (temporary).—For T.C. John Morgan, T.C.

JUNE 4.

***East Ham.**—Chief Architectural Assistant.—For C.B. B.E., Town Hall, E.6.

CURRENT AND PROPOSED BUILDING WORK*

Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Alfreton.—Derbyshire C.C. propose 2 Council schools.

Alnwick.—R.D.C. to proceed with covered reservoir at Shilbottle Woodhouse. Tenders invited. Plans by S.

Alwoodley.—Tenders being invited for sub-station on Alwoodley Farm estate. Plans by the Architect to Leeds Electricity Dept., Whitehall-rd., Leeds.

Appleton.—T. Price & Son, 77, Lord-st., Liverpool, architects for extensions to St. Bede's Catholic schools.

Banbury.—T.C. approved: Alterations to Whateley Hall Hotel, Horsefair, for Whateley Hall, Ltd.

Barum.—T.C. approved: Hotel, Bickington-rd., Oliver & Son, for Woolaway & Sons.

Beeston.—U.D.C. approved erection of 318 houses adjoining new by-pass road between Dovecote-lane and Chilwell boundary.

Berkhampstead.—R.D.C. approved: Alteration and additions to "Bridgwater Arms," Little Gaddesden, for Trust Houses, Ltd.

Birmingham.—Rev. D. Murphy, P.P., Church of Our Lady of Lourdes, 16, The Haven, Shilton-rd., Yardley Wood, propose schools in Yardley Wood-rd. Architects, Harrison & Cox, 109, Colmore-row.

Black Notley.—Essex C.C. to obtain tenders for permanent verandahs to surgical wards at sanatorium at £909.

Blackpool.—T.C. approved:—86 houses, Holmfield-rd., Sir L. Parkinson & Co.; 45 houses, Acre Gate and Pennine-rd., Hitchen & Bairstow; swimming pool, café and shops, Lytham-rd. and Rawcliffe-st., Lido Swimming Pool, Ltd.

Bolton.—Co-operative Society propose stores at junction of Chorley Old-rd. and new road leading to Old Kiln-lane. G. Temperley & Son, architects, Bradford-bldgs. Contracts not yet placed.—Catholic Authorities of St. Columba, Ripley-st., Tonge Moor, Rev. John O'Dwyer, P.P., propose elementary school for 200 children. H. Greenhalgh, P.A.S.I., architect, 15, Mawdsley-st.

Bradford.—Plans prepared for reconstruction of All Saints' modern schools. Tenders to be invited. Architect, R. B. Armistead, Booth-st.

Brentwood.—Essex C.C. recommend temporary building at mental hospital to accommodate 45 female patients, at £2,512.

Bromley.—T.C. approved:—71 houses, Pickhurst-lane and proposed new road, H. F. Thoburn, Ltd.; sports pavilion, Rangefield-rd., H. J. Lambert; sports pavilion, Oakley-rd., E. E. Hammond.

Carlisle.—T.C. approved:—Estate lay-out, Knowefield estate, A. Blakeley & Sons; 64 houses, Inglewood estate, off Wigton and Orton-rds., the Border Engineering Contractors, Ltd.

Cheadle.—J. Wild & Co. (Estates), Ltd., 42, King-st. West, Manchester, propose completion of Brookhead estate by additional 700 houses, semi-detached and detached bungalows and villas. Resident Architect, T. Pickmere.

Cheltenham.—T.C. approved: Lay-out 73 houses in Eldon-rd., by Wheeler & Mansell.

Chipping Ongar.—Essex C.C. propose senior school, at £20,194.

Chorley.—Very Rev. Thomas Flynn, P.P., St. Mary's, Market-st., and Managers propose alterations to school buildings. Plans prepared by G. J. Hughes, Union Bank-chams., St. Annes-on-Sea.

Colne.—Holgate & Spivey, Market-st., preparing plans for headquarters in Albert-rd. for Colne Building Society.

Darlington.—L.N.E.R. Co. to carry out improvement scheme at Bank Top station.

Dewsbury.—T.C. to purchase for £4,000 land at Lees Moor, Thornhill Lees, from Savile estate, for housing site; also land at junction of Heckmondwike-rd., Ravensthouse-rd. and Pump-lane for £1,130 from W. H. Oldroyd.

Devizes.—T.C. approved: 26 houses, Jump Farm housing estate, R. C. Overington.

Doncaster.—Whitworth, Son & Nephew, Ltd., The Brewery, Cleveland-st., propose rebuilding "Lord Nelson" hotel. Architects, Wilburn & Atkinson, Exchange-bldgs., Market-place. Contracts not let.

Droylsden.—W. Farley, builder, West-st., proposes 80 semi-detached houses, Alderdale estate, Edge-lane. Architect, G. W. George, 11, Raincliffe-av., Beresford-rd. Longsight, Manchester.

Gateshead.—T.C. approved plans for R.C. church in Kelvin-grove. Architect, R. Burke, 12, Grey-st., Newcastle. Contract not placed. Cost £5,000.

*See also List of Contracts open.

**** In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.**

Gillingham.—T.C. approved: 24 houses, Woodlands-rd., City of Rochester Land Co.; 22 houses, Cecil-rd., Mackintosh Bros.; 120 houses, Hawthorn-av., G. H. Ward; and conversion of school into flats, Brompton, School Governors, Holy Trinity.

Godalming.—T.C. approved: Church hall, Ockford Ridge, for Parochial Church Council.

Grays.—Site for school to be purchased by Essex E.C.

Harold Wood.—Essex E.C. recommend school, at £21,042.

Hebburn-on-Tyne.—U.D.C. approved slum clearance scheme involving 795 houses.

High Beech.—Essex C.C. recommend renovations at sanatorium at £250.

Horden Colliery.—School for 360 boys to be built and a school for 400 infants at Billingham by Durham C.C. F. Willey, 34, Old Elvet, Durham, architect.

Houghton-le-Spring.—U.D.C. declared slum-clearance scheme involving the demolition of 100 houses and the erection of 100 houses. V. Hunter, S.

Hyde.—At £2,000, Botanical and Horticultural Club to build premises on old Hyde-lane colliery ground.

Kelvedon Hatch.—Essex C.C. recommend site for enlargement of school.

Kettering.—U.D.C. approved: Lay-out for 344 houses and cinema in Rockingham-rd., for Stewarts & Lloyds; also cinema in High-st., for Peterborough Estates, Ltd.

Leicester.—Ogden & Willford, F.R.I.B.A., 42, Silver-st., architects for extensions to works of Imperial Typewriter Co., London-st.

Lewes.—T.C. approved: Alterations, 196, High-st., for Milward & Son, Ltd.; and alterations, Castle precincts, J. C. Lucas.

Litherland.—P. Walker & Sons (Warrington and Burton), Ltd., 105, Duke-st., Liverpool, propose licensed premises at junction of Field-lane and Hatton Hill-lane. Architects, H. E. Davies & Son, F.R.I.B.A., Wellington-bldgs., The Strand, Liverpool. Cost £10,000.

Liverpool.—Plans being drawn up for welfare centre to serve Dovecot area at rear of Dovecot-pl.

London (Bermondsey).—L.C.C. sanction borrowing by B.C. of £2,267 for acquiring property for Millpond housing.

London (Bethnal Green).—L.C.C. recommends acquisition of lands in Hollybush-gardens (Nos. 2 and 4) clearance areas for erection of dwellings for rehousing purposes.

London (Bow).—L.C.C. recommend £1,458 for fire precautionary works at City of London Institution.

London (City).—Corporation to carry out the work of general cleaning of Library roof timbers and walls at £250, and cleaning and repolishing the oakwork at £900.

London (Deptford).—B.C. approved: M.W.B., 173, Rosebery-av., E.C.1, additions, Deptford Works, Brookmill-rd.; Henry Boot & Sons, Ltd., 10, The Boltons, S.W.10, block No. 5, London County Council Honor Oak estate.

London (Fulham).—B.C. recommend purchase of land at rear of 72, Petley-rd., adjoining Warwick-cottage, Wingrave-rd., for sub-station.—Plans passed:—Guy Rogers, lock-up garages, corner of Mornington-av. and Conan-st.

London (Hackney).—B.C. informed that L.C.C. are prepared to lease to Council site at south-east corner of yard at rear of Valette-st.-bldgs. for transforming station.—Plans passed: "New Institute," Rivaz-pl.; 12 maisonettes, Otley-terr., adjoining South Millfields recreation ground; block of flats, Lyme-grove.—L.C.C. sanctioned borrowing by B.C. of £17,000 for housing.

London (Hammersmith). — L.C.C. recommend £2,436 for entrance and roadway at Hammersmith hospital.—L.C.C. recommend £209 for adaptation of block F at hospital (institution) as nurses' home.

London (Herne Hill).—L.C.C. recommend £240 for mortuary building at Loughborough estate.

London (Islington).—L.C.C. recommend £1,050 for fire precautions and means of escape at institution.

London (Kensington).—B.C. approved petrol filling station at 185, Walmer-rd.

London (Kentish Town).—L.C.C. recommend £3,155 for provision of accommodation at St. Margaret's hospital.

London (Norwood).—L.C.C. sanctioned £515 for minor improvements at Norwood hospital for children.

London (Stepney).—L.C.C. recommend £15,000 in respect of acquisition and clearance of property in Quaker-st. (Nos. 1 and 2) areas.

London (Shoreditch).—B.C. approved: Warehouse, rear of 12 and 13, Fleming-st.; blocks of flats, Aske House, Fanshaw-st.—Council to proceed at £300 with reconstruction of Cavendish-st. lavatory.

London (Whitechapel).—L.C.C. sanctioned £1,561 for adaptation of Trinity-st. former divisional offices as kitchen and dining centre.—L.C.C. recommend £420 for isolation accommodation and shelter for tuberculous patients at St. Peter's hospital.

London (Woolwich).—L.C.C. sanctioned borrowing by B.C. of £11,420 for sewerage work at Wickham Valley.

Loughborough.—Health Committee of T.C. to ask Housing Committee to submit plans for 38 houses prepared some time ago.

Loughton.—Essex C.C. recommend land in Roding-rd. as part of site for Loughton proposed Council senior school.

Lowestoft.—London C.C. recommend £220 for improvements at St. Luke's hospital.

Luton.—Proposals for purchase of land at Toddington and Tebworth, and for 52 houses and 6 bungalows on sites, approved by R.D.C.

Lytham St. Annes.—T.C. approved: Church, Sir L. Parkinson & Co., Ltd.

Malvern.—U.D.C. approved: Additions and alterations to "Cross Keys Inn." Belmont-rd., for Spreckley Bros., Ltd.; additions to St. Joseph's Roman Catholic Schools, Newtown, for Managers.

Manchester.—Plans approved by T.C. include:—32 houses, Chapman-st., Gorton, F. W. Woolfenden & Co., 208, Hamilton-rd.; 40 houses, Burnage-lane, Pearn-rd. and Pearn-av., Burnage, Sparke & Stephens, Ltd., Manchester-rd., Whalley Range; 12 houses, Briscoe-lane, Newton Heath, Provincial Estates (Blackpool), Ltd., Queen-st., Blackpool; 26 houses, Albany-av., Rosian-st., Ashbrooke-st., Hobson-st., West Bank, Rayleigh-av. and Evington-av., Openshaw, Fairholme Estate Co., Ltd., 44, Brazennose-st., Manchester; 30 houses, Wilcox-rd. and Crofton-rd., Northen Etchells, E. France & Sons, 50, Windsor-av., Gatley; 23 houses, Altrincham-rd., Woodhouse-lane and Bromley-rd., Wythenshawe, Twentieth Century Building Co., Ltd., 42, Deansgate; 49 houses, Altrincham-rd., etc., Northenden, Bolver & Co., 20, Cecil-st., Greenheys; 36 houses and 8 shops and houses, Jackson-st., Fleet-st., Abbey Hey-lane and King-close, Openshaw, E. E. Coleman, 11, Washway-rd., Sale; 24 houses, Kenyon-lane and McConnell-rd., Moston, F. McConnell & Co., 298, Moston-lane; 47 houses, Horncastle-av. and Bourne-drive, Moston; Booth, Tonge & Co., 67, Church-st., Harpurhey; offices, 213, Hyde-rd., Gorton, Britannic Assurance Co., Ltd., Bond-st. Corner, Birmingham; clubrooms and showrooms, Bedford-st. and Bury New-rd., Cheetham, B. Beenstock, George Leigh-st., Ancoats; alterations and additions to "Old Trafford" inn, Stretford-rd. and Erskine-st., Hulme, Hardy's Crown Brewery, Ltd., Renshaw-st., Hulme; alterations and additions to premises, Watling-st., Shudehill Pifco, Ltd., "Pifco House," meeting hall, Ennice-st., Bradford, Mrs. J. A. Lewis, 87, Sandywell-st.; rebuilding of the "Sir Charles Napier" inn, Lower Moss-lane, Hulme, J. Tetley & Son, Ltd., The Brewery, Leeds; additions to Babies' Hospital, Slade-lane, Burnage, Committee, Babies' Hospital, Slade-lane, Burnage; exhibition hall, Queen's-rd., Cheetham, Northern Exhibitions and Union Founders Trust, Ltd.—T.C. approved plans for electricity sub-station, Broadoak-lane, East Didsbury, for E.C.—R. C. Roy, 27, King-st. West, proposes 500 houses at Ford Bank estate, Didsbury, 100 houses on land at Park-rd., Heaton Park, and 50 houses on land at Grange estate, Wilmslow.

Methley.—Tenders invited for pit-head baths and canteen at Water Haigh Colliery of Hy. Briggs, Son & Co., Ltd. Plans by J. H. Forshaw, architect, Mines Dept., Dean Stanley-st., London, S.W.1.

Middlesbrough.—Archibald & Archibald, 26, Albert-rd., taken out plans for additional story at administration block at Carter Bequest Hospital, Cambridge-rd., Linthorpe. No contracts let.

Morecambe.—E.C. proposing school for 480 senior scholars. Plans by B.S.

Nelson.—T.C. approved:—Clough Head Estate Co., 26 houses, Bath-st.

Newburn-on-Tyne.—Hetherington & Wilson, architects and surveyors, 52, Westgate-rd., Newcastle, prepared lay-out plan for development of South Denton estate, involving the building of 199 houses.—M.H. sanctioned land at Bell's Close for 25 houses for families displaced under the slum-clearance scheme. Plans by J. H. Weatherley, S.—Housing estate for 199 houses at South Denton and plans been approved. Hetherington & Wilson, architects, County-chams., Newcastle.

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MECHANICAL PERFECTION

COBURN SYSTEM

Latest Catalogue on Request.

THE BRITISH TROLLEY TRACK CO., LTD.
Orange Street, S.E.1.

Agents Everywhere.

Newcastle-on-Tyne.—Newcombe & Newcombe, 23, Eldon-sq., architects for alterations to J. C. Elliott's showrooms, Bath-lane and Rutherford-st. No contracts let.—B. of E. sanctioned public elementary school for 480 boys in Northumberland-rd. for E.C. Plans by Architect's Dept., Education Offices, Northumberland-rd., Newcastle. Tenders not yet invited.—Warehouse to be built in Back, Ridley Villas, for Kinghorn & Sons, 114, Newgate-st. No contracts let. Architects, Liddle & Batchelor, Eldon-sq.

Northallerton.—Wesley Dougill, 127, Chatham-st., Liverpool, architect for church at Crakehall for Trustees Methodist Union.

Nottingham.—Senate of the Nottingham University propose extension of Lenton Hall Students' Hostel. Architects, W. B. Starr & Hall, 12, Victoria-st.

Orsett.—R.D.C. approved plans for 5-story building for Bata Shoe Co. at East Tilbury, and erection of 61 houses on The Lawns estate, Little Thurrock, by Harvey & Doughty.

Portsmouth.—T.C. approved:—G. Wallis, 66 houses, off Hayling-av.

Ramsgate.—B.E. to submit plans and estimates for 20 non-parlour type houses at West Dumpton housing site.

Redcar.—T.C. secured site at Dormanstown for additional 25 houses for aged people. Plans by J. Locking, S. No contracts let.

Rugby.—R.D.C. approved: Additions and alterations "Rose Inn," Willoughby, for P. Phipps & Co.

Sedgefield.—H. W. Abey, builder, has presented plans to R.D.C. for 32 houses.

Skegness.—U.D.C. approved: Further 120 houses, by G. H. Hannam.

Smethwick.—T.C. propose residential home for children on Firs estate.

South Shields.—T.C. approved scheme of alterations to police buildings. Plans by J. Reid, B.E.—T.C. to proceed with building by contract of 250 houses at West Harton. J. Reid, B.E.

Stockport.—E.C. to acquire site at Heaton Mersey for high school. Plans by L. Yates, L.R.I.B.A., Architect's Department, Town Hall.

Stoke-on-Trent.—Ball & Robinson, Trent Bridge, Hanley, propose 300 houses, Blurton Green estate.

Stretford.—B.S. to prepare plans and estimates for conversion of stables at Empress-st. sanitary depôt to garages.—Council resolved that Mayor be authorised to pursue negotiations with De Trafford Estate for acquisition of land for housing purposes and that arrangements submitted by T.C. for approximately 60 houses to meet Council's rehousing obligations in relation to schemes in Clifford Ward and King-st. and Bennett-st. clearance area be approved.—Plans passed: 34 houses, Hillingdon-rd., etc., Little & Rich; grocery packing warehouse, Trafford Park-rd., Co-operative Wholesale Society, Ltd.

Sunderland.—E. & J. Purvis, builders, Garcia-ter., starting work on 22 semi-detached houses on Sidecliffe Park estate. Lay-out plans by O. T. Brown & Sons, 51, Fawcett-st.—Finance Committee to raise no objection to £5,500 on plunge bath in Hendon-rd. Plans by T. P. Collinge, B.E. No contracts let.—E.C. to carry out alterations to latrines at Hudson-rd. Council schools. Plans by O. T. Mark, Education Architect. No contracts placed.—A. Suttell, architect, 2, Victoria-av., Harrogate, prepared plans for 24 pairs of semi-detached houses in Cheviot-st. and Orchard-st.—H. T. D. Hedley, architect, 49, Frederick-st., to prepare plans for lay-out of 66 acres of land adjoining Alexandra-rd. on Tunstall estate.

Sutherland.—C.C. received letter from Department of Agriculture intimating grant of 75 per cent. of improvements proposed at Embo pier, estimated to cost £3,000.

Urmston.—H. Hampson & Son, builders, 4, Canute-rd., Stretford, propose 70 semi-detached and detached houses, new road from Crofts-bank to Stretford-rd. Plans by own staff.

Wallasey.—Quiggin & Gee, FF.R.I.B.A., 17, North John-st., Liverpool, architects for offices and garage in Leasowe-rd. for Barker & Jones, Ltd.

Warrington.—T.C. to consider nurses' home for Borough General Hospital.

Weston-super-Mare.—U.D.C. instructed Engineer to prepare plans for model yacht pond in Ashcombe Park.

Whitley Bay.—Practical instruction rooms to be added to Whitley North school. Plans by W. W. Tasker, 17, Claremont-place, Newcastle. Contract not placed.

Wigan.—Alan E. Munby, M.A., F.R.I.B.A., 9, Old-sq., Lincoln's Inn, W.C.2, preparing sketch plans for grammar school buildings for Board of Governors. Estimated cost £50,000.

Windsor.—R.D.C. approved: Alterations to "New Inn," Sunninghill, for Ashby's Staines Brewery.

Wolverhampton.—South Staffordshire Golf Club members (chairman, Major C. R. Dibben, Green House, Tettenshall) propose additions to golf house.

Wrekenton.—Extensions to be made to St. Oswald's Church Hall. Architect, J. W. Corking, 16, West-st., Gateshead. Contract not placed.

York.—Tenders being invited for additions at Purey Cust nursing home for Board of Management. Architects, Ward & Leckenby, Museum-st.

HOUSING ACT, 1930

DEMANDS FOR EXPENSES INCURRED

Two important points were raised in the recent case, West Ham Corporation *v.* Charles Benabo and Sons (*The Times*, March 29), under sections 17 and 18 of the Housing Act, 1930. The Corporation were suing the defendants for expenses which the Corporation alleged they had incurred under section 18 in repairing certain houses on default of the defendants to execute the same in accordance with notices served upon them under section 17. The defendants alleged that they had executed all the works required by the notices, and that the work for which the Corporation were now claiming was outside that required by the notices. The issue as to whether the expenses were incurred on work outside the notices appears not to have been tried, as the decision turned upon a further point raised by the defendants that the "demands" made by the Corporation under section 18 were bad for two reasons: (1) That they had not been signed by the clerk or deputy clerk of the Corporation; and (2) that the expenses incurred in respect of each house were not defined, the demands being in two lump sums with respect to several houses in two streets. The Court held that the demands were bad for both reasons, and that a demand which failed in either of the above matters was not a demand which created a legal liability.

The second question, which the Court said was one of considerable difficulty, was whether by reason of section 22 of the Act, an appeal on the above points should have been made to the county court. That section gives any person aggrieved by (*inter alia*) a demand for the recovery of expenses incurred by a local authority in executing works specified in such notices, an appeal to the county court (with a further appeal on questions of law to the Court of Appeal), and such appeal is to be final, and no proceedings are to be taken by a local authority to enforce a demand against which an appeal has been brought before that appeal has been finally determined. The Court held that as the documents in this case did not comply with the Act, and did not create a legal liability to pay such expenses, they could not subsequently create such a liability by a failure to appeal, and the defendants were not debarred from raising that objection by reason of their failure to appeal, and the action was dismissed with costs.

Until the case is reported in full, detailed consideration of this last point is not possible; but it may be observed that in Cohen *v.* West Ham Corporation (1933, 1 Ch. 814; *The Builder*, October 27, 1933) a judge of the Chancery Division of the High Court, in a case where there had been no appeal to the county court, entertained a claim that the local authority were not entitled to enter premises under section 18 to carry out works required by notices served under section 17, unless non-compliance with the notices could be shown, and the case was adjourned for an inquiry and report on this point. In that case it was also contended that the notices were invalid, but the Court held that they were valid, and on this latter point alone the case was carried to the Court of Appeal, where the opinion was expressed that the notices were valid; but in both courts it was held that the question as to the validity of the notices was a question which should have been the subject of an appeal to the county court under section 22.

Preservation of Bungay Castle.

A first appeal has been issued for £500 towards the preservation of the ruins of Bungay Castle, Suffolk. The appeal is published by the Town Reeve and Feoffees of Bungay, with the co-operation of the Suffolk Institute of Archæology and Natural History, the Norfolk and Norwich Archæological Society, the Suffolk Preservation Society and local Fellows of the Royal Historical Society.

NEWS ITEMS

St. Peter's Hall, Oxford.

Lord Nuffield has given £10,000 to the fund for the erection of St. Peter's Hall.

An Appointment.

Mr. A. Stewart Kinnear, chief architect and surveyor of the British Aluminium Co., Ltd., Burntisland, has been appointed to the chair of the Institution of Scottish Structural Engineers.

A New School Chapel, Southwold.

A new chapel at St. Felix School, Southwold, has been dedicated by the Bishop of St. Edmundsbury and Ipswich. The building is the gift of the Hon. Alexander Shaw. The architect is Mr. A. Greig, F.R.I.A.S., of Edinburgh.

Tenements and Dust.

The problem of dust shoots from municipal tenements has been causing a good deal of trouble, writes a correspondent. In many cases the refuse is scattered on the ground and causes dust and a nuisance. The London County Council have now made arrangements for the provision of baffles, or shutters, to the discharging end of dust shoots on certain of the Council's dwellings. It has further been decided that in all future dwellings the dust shoot shall be constructed so as to enable discharge of refuse into movable containers, in anticipation of the container system being adopted by all local authorities.

Structural Engineers' Conference.

A programme of the Institution of Structural Engineers' Summer Conference, which is to be held this year at Bath on June 6-8, has now been issued. The principal events will include:—Installation of Mr. Ewart S. Andrews, B.Sc., M.Inst.C.E., M.I.Struct.E., as President of the Institution for the Session 1934-35. Civic Reception by His Worship the Mayor of Bath. Two technical papers by Mr. A. J. Newman, M.I.Mech.E., M.I.E.E., and Mr. P. Wordsworth, B.Sc., A.M.Inst.C.E. Institution Banquet at the Guildhall. Visits to works. Copies are obtainable from the Secretary at 10, Upper Belgrave-street, S.W.1.

Phyllis Court, Henley.

An interesting building development is taking place in the grounds of the Phyllis Court Club at Henley. Here are being established cloister residences on the lines of the colleges at Oxford and Cambridge. On the ground floor is a sitting-room 18 ft. by 18 ft., with a dining-room adjoining, 13 ft. by 12 ft. There are three bedrooms and a bathroom upstairs. These dwellings in the cloisters may either be used as complete homes, or else occupied in conjunction with the club for meals, and at any time can be locked up and left under the care of the club officials. This is a new development of the Country Club on the grand scale, which has for so long been a feature of social and sporting life in America.

Memorandum on the Bed-Bug.

The Ministry of Health has issued a memorandum on the subject of the bed-bug and how to deal with it. In connection especially with the present campaign for the clearance of the slums, it is pointed out that it is essential that bed-bugs should not be transferred to new houses when the tenants have been residing in infested premises. Moreover, the disinfestation of a new house and the repair work which has to be undertaken by the Council where infestation occurs involves a heavy charge on the housing accounts. The Council are urged to take into their immediate consideration the question of securing disinfestation wherever the nuisance is found to occur. Copies of the memorandum may be obtained from H.M. Stationery Office or through any bookseller.

TRADE NEWS

Additions to Works.

A new bay has been added to the works at Park Royal, N.W.10, of B.E.N. Patents, Ltd., and the additional space thus afforded brings the total floor area up to 25,600 sq. ft. We are informed that the necessity for having more room became evident last year with the growing demand for B.E.N. specialities, and as the business done this year has exceeded any previous year for the same period, it is difficult to visualise how production demands could have been met without this extra space.

Standardisation of Plywood.

A further step has been taken in the standardisation of Venesta plywood. For some time Venesta plywood floorboards have been available, but these are now being made in two standard sizes (36 in. square and 18 in. square), under the name of "Venesta Nilnot Squares." "Nilnot" is one of the standardised birch plywood grades, and it is used extensively for these floor squares, the squares being specially cut dead square and finished at the edge to facilitate laying. These squares can be laid direct on to joists with an underboard of Venesta "Mornot," or the "Nilnot" squares can be put direct on to the existing floor. Further details are available from Vintry House, Queen Street-place, E.C.4.

Data for Constructional Steelwork.

Messrs. John Lysaght, Ltd., have issued a data sheet giving in tabular form information on constructional steel that should be most useful to structural engineers. Safe loads on girders, stanchions and round steel columns; permissible floor loads; pressures on concrete foundations on various subsoils, etc. Architects, engineers and builders who wish a copy should apply to Messrs. Lysaght, at Constructional Works, Bristol, 2.

Uses of Asbestos.

Messrs. Bell's Asbestos and Engineering Supplies, Ltd., held on May 10 a demonstration of the uses of asbestos in connection with prevention of, and protection from, fire at their works at Slough. For the purpose of carrying out the demonstration, a special asbestos-lined tunnel was constructed, the whole length being approximately 60 ft. The dimensions were almost exactly those of the alleyway of a ship. In this was lit a fire. Over part of the tunnel was erected a structure, built entirely of wood, intended to represent two rooms of an upper floor. The roof of the tunnel was so devised that one section of the asbestos material could be withdrawn, thus exposing the ordinary floor material of one of the upper rooms to the intensity of the flames. It was a matter of a few moments for the fire to gut one of the rooms entirely, leaving its asbestos-protected partner entirely undamaged. The company responsible for the demonstration is one which has been associated with asbestos almost ever since the days when its numerous applications were first visualised. One of these applications of especial value to the building and allied trades is the asbestos glove, which completely insulates the hand from heat, enabling even molten metal to be handled.

Town Planning and Ministry of Health.

Changes have recently taken place at the Ministry of Health with regard to the administration of town planning. For a number of years past town planning has been under Dr. I. G. Gibbon, an Assistant-Secretary of the Ministry, but his duties have now been transferred to Mr. H. W. S. Francis, the head of the Housing Department. In this way housing and town planning are linked together. It is believed that this will be helpful, bearing in mind the necessity of planning in relation to the redevelopment and reconstruction of obsolescent areas.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to Mortlake.

	£	s.	d.
Best Stocks	4	2	0
Second Hard Stocks	3	10	0

Per 1,000. Delivered at London Goods Stations.

	£	s.	d.		£	s.	d.
"Phorpres"	2	11	3	Flettons, B'll'n'se	3	6	3
Flettons at King's Cross	2	11	3	Best Blue Pressed Staffs	9	5	0
Do., grooved for Plaster	2	13	3	Do. Bullnose	9	15	0
				Blue Wire Cuts	7	5	0

White Midhurst Facing Bricks (delivered London site) 5 0 0
"Phorpres" whites (do.) 3 17 3
"Phorpres" Rustic Facing Bricks, delivered Central London ..... per 1,000 3 12 3
Best Stourbridge Fire Brick:—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21	0	0
Headers	20	10	0
Quoins, Bullnose and 4½ in. Flats	27	10	0
D'ble Str'tch'rs	29	10	0
D'ble Headers	26	10	0
One side and two Ends	30	10	0
Two sides and one End	31	10	0
Splays and Squints	28	0	0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

CLINKER CONCRETE.

2" per yd. sup.	1	6		3" per yd. sup	2	0	
2½" " "	1	8		4" " "	2	4	

CRANHAM TERRA COTTA.

2" per yd. sup.	3	0		3" per yd. sup.	3	8	
2½" " "	3	6		4" " "	4	7	

HEMPSTEAD—KEYED TWO SIDES.

2" per yd. sup.	3	3		3" per yd. sup.	3	9	
2½" " "	3	6		4" " "	4	3	

	s.	d.	
Thames Ballast	7	3	per yd. delivered in 2 miles radius Paddington.
Pit Ballast	6	3	" "
Pit Sand	7	9	" "
Washed Sand	8	3	" "
¼ in. Shingle	7	3	" "
¼ in. Broken Brick	11	3	" "
Pan Breeze	8	3	" "

CEMENT.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test	
In Jute Sacks (11 to ton)	£1 18 0
In Paper Bags (20 to ton)	1 18 0
Colorcrete No. 1 & 2 Coloured Rapid Hardening Portland Cement in 1 cwt. paper bags free (non-returnable) £3 6s. per ton.	
"Snowcrete" White Portland Cement in 1 cwt. paper bags free (non-returnable) 175/- per ton.	
Portland Cement Alongside Vauxhall in 80 Ton Lots.	
Jute Sacks (11 to ton)	1 14 0
Paper bags (20 to ton)	1 14 0
Ferrocrete per ton extra on above	0 7 6
Vitocrete per ton extra on above	0 7 6

NOTE—Jute Sacks are charged 1s. 6d. each and credited 1s. 6d. each nett if returned in good condition within three months, carriage paid.

Super Cement (Waterproof) Paper Bags free	3	8	0
Roman Cement	6	15	0
Parian Cement	5	15	0
Keene's Cement, White	5	15	0
" " Pink	5	10	0

PLASTER.

Plaster, Coarse, Pink	3	0	0
" " White	3	12	6
" Fine	4	12	0
Sirapite, Coarse	3	9	0
" Finish	3	17	0
Grey Stone Lime	2	5	0
Chalk Lime	2	5	0
Best Ground Blue Lias Lime	1	17	6
Hair ..... per cwt.	2	2	6
Granite Chippings	1	12	0

NOTE.—Sacks are charged 1s. 6d. each and credited 1s. 6d., if returned in good condition within three months carr. pd.

Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep.

STONE.

	s.	d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2	10
BEER STONE—RANDOM BLOCK—		
Free on rail at Seaton Station, per ft. cube	2	3
Delivered free on rail Nine Elms, S.R. per ft. cube	3	1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.		
PORTLAND STONE—		
Brown Whitbed, in random blocks of 20ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4	4½
Do. do. delivered on road waggons at above stations, per ft. cube	4	5½
White basebed, 3d. per ft. cube extra.		
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.		
HOPTON-WOOD STONE—		
F.O.R. Quarries Wirksworth, Derbyshire, Random blocks from 10ft. and over P.ft.cb.	14	0
Sawn two sides	22	6
Sawn, three or four sides	27	6
CHILMARK—RANDOM BLOCK—		
At Nine Elms, per ft. cube	3	11
YORK STONE, BLUE—*Robin Hood Quality.*		
Delivered at any Goods Station London.		
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... Per ft. super	5	6
6 in. rubbed two sides, ditto ..... "	6	0
3 in. sawn two sides slabs (random sizes) "	2	3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... "	1	6½
1¼ in. to 2 in., ditto ..... "	1	3½
HARD YORK—		
Delivered at any Goods Station, London.		
Scappled random blocks ..... Per ft. cube	0	3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super	5	1½
6 in. rubbed two sides, ditto .. "	6	1½
4 in. sawn two sides slabs (random sizes) "	3	1½
3 in. ditto ditto "	2	8
2 in. self-faced random flags .. Per yd. super	8	0

CAST STONE.

Delivered in London area in full van loads, per ft cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 × 11	£22 10	3 × 6	£18 10
4 × 9	22 10	3 × 11	19 10
4 × 8	21 0	2 × 11	19 10
4 × 7	19 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 10	3 × 4½	18 0
2½ × 7	18 10	3 × 4	18 0

PLANED BOARDS.

1 × 11	£22 10	1 × 9	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅜	16/-	1¼	26/-
½	17/-	1½	32/6
⅝	20/-		
1			

TONGUED AND GROOVED FLOORING.

Inches.	per sq.	MATCHING (BEST). Inches.	per sq.
1	21/-	⅜	16/-
1¼	26/-	½	18/6
1½	32/6	1	22/6

	s.	d.		s.	d.
ins. BATTENS			SAWN LATHS.		
½ × 2 ..per 100 ft.	2	6	Per bundle	2	3

HARD WOOD.

1 INCH AND UP THICK.

	£	s.	d.
Average price for prime quality.			
Dry Austrian Wainscot, per ft. cube	0	15	0
Dry American and/or Japanese Figured Oak, per ft. cube	0	12	0
Dry American and/or Japanese plain Oak, per ft. cube	0	10	0
Dry sq. edged Honduras Mahogany, per ft. cube	0	14	0
Dry log-cut Honduras Mahogany, per ft. cube	0	16	0
Dry Cuba Mahogany, per ft. cube	1	1	0
Dry Teak, per ft. cube	0	14	0
Dry American Whitewood, per ft. cube	0	10	0
Best Scotch Glue, per cwt.	3	0	0
Liquid Glue, per cwt.	4	7	0 to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£	s.	d.		£	s.	d.
24 by 12	29	15	0	18 by 10	15	12	6
22 by 12	25	0	0	18 by 9	13	15	0
22 by 11	22	10	0	16 by 10	13	10	0
20 by 12	22	0	0	16 by 8	10	7	6
20 by 10	19	7	6				

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons.

	Per 1,000 f.o.r. London.
Best machine-made tiles from Broseley or Staffordshire district	£4 7 0
ditto hand-made ditto	5 0 0
Ornamental ditto	5 8 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£11 0 0
Plain Compound Girders	12 0 0
" Stanchions	15 0 0
In Roof Work	18 0 0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£	s.	d.	Diameter.	£	s.	d.
½ in.	12	0	0	⅝ in. to ¾ in.	10	15	0
⅞ in.	11	0	0	⅞ in. to 2½ in.	10	10	0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars Sizes ⅛ in. to 6 in.	Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ⅛ in. to 6 in.	Standard Fittings Sizes ⅛ in. to 6 in.	Standard Flanges Sizes ⅛ in. to 6 in.
	%	%	%	%
Gas	65	52½	57½	70
Water	61½	48½	52½	65
Steam	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Price ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/5½	1/1½	4½d.
3½ in.	1/6½	1/3	5½d.
4 in.	1/6½	1/4½	6½d.
4½ in.	1/8	1/6½	9½d.
5 in.	1/10½	1/8½	10d.

O.G. GUTTERS.

3 in.	1/7½	1/5½	7d.
3½ in.	1/9½	1/5½	7½d.
4 in.	1/11	1/6½	8½d.
4½ in.	2/0	1/9½	9½d.
5 in.	2/4½	2/0½	11½d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in.	2/2½	1/4½	2/0
2½ in.	2/3½	1/6½	2/4½
3 in.	2/9½	1/11	2/10½
3½ in.	3/3½	2/3½	3/3½
4 in.	3/9	2/9	4/0½

Less 20 per cent. trade discount.

Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Stock.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts.	2 8	1 11	2 3
2½ in. "	3 0	2 1	2 10
3 in. "	3 4	2 3	3 5
3½ in. "	2 7½	2 10	3 11
4 in. "	4 0	3 2	4 6

L.C.C. COATED DRAIN PIPES—London Prices ex Stock.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	3 0	4 6	7 0
4 in. " 1 1 20 cwt. qr. lbs.	4 9	5 6	8 9
5 in. " 1 2 22	5 10	9 6	13 6
6 in. " 2 0 6	6 10	12 0	18 0

Gaskin for jointing 41/- per cwt.

	Per ton in London. £ s. d.		£ s. d.
IRON—			
Common bars	10 0 0	to	10 10 0
Staffordshire Crown Bars— Good merchant quality	10 10 0	to	11 0 0
Staffordshire Marked Bars	14 0 0	..	15 0 0
Mild Steel Bars	9 0 0	..	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 10 0	..	9 0 0
Hoop iron, basis price	11 0 0	..	12 0 0
" Galvanised	27 10 0	..	28 10 0
Soft Steel Sheets, Black—			
Ordinary sizes, to 20 g.	11 0 0	..	11 10 0
" " " 24 g.	12 0 0	..	13 0 0
" " " 26 g.	14 0 0	..	15 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	14 0 0	..	15 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	15 0 0	..	16 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17 10 0	..	18 10 0
No. 1 quality £4 per ton extra.			
Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13 10 0	..	15 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	15 10 0	..	16 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16 10 0	..	18 0 0
Sheets, Galvanised Flat, Best quality—			
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	14 10 0	..	16 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	15 0 0	..	17 0 0
Best Soft Steel Sheets, 26 g.	16 10 0	..	18 0 0
Cut Nails, 3 in. to 6 in.	15 10 0	..	17 0 0
(Under 3 in. usual trade extras.)			

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

		s.	d.
Seamless Copper tubes (basis)	per lb.	0	9
Strong sheet	"	0	10
Thin	"	0	11
Copper nails	"	1	0
Copper wire	"	0	11

PLUMBERS' BRASS WORK.

Delivered in London

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(cont'd).

RIVER PATTERN SCREW DOWN MAIN FERRULES.

¾ in	1 in	1¼ in
39/-	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/- 63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.F

¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH GRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.	
8 lbs. P. traps	33/-	41/-	56/-	101/-	per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/-	,,

TIN.—English Ingots, 2/5 per lb. SOLDER.—Plumber 1/-, Tinmen's, 1/2, Blowpipe, 1/3 per lb.

LEAD, &c.

(Delivered in London.)	£	s.	d.
LEAD—Sheet, English, 4 lb. and up	18	10	0
Pipe in coils	17	0	0
Soil pipe	24	10	0
Compo pipe	25	0	0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 4s. per cwt. extra, and over 3 cwt. and under 5 cwt., 2s. 6d. per cwt. extra. Cut to sizes 4s. cwt. extra.

Old lead, ex London area, at Mills.....per ton £9 10 0

PAINTS, &c.

		£	s.	d.
Raw Linseed Oil, in pipes	per gallon	0	2	8
,, ,, ,, in barrels	,,	0	2	10
,, ,, ,, in drums.....	,,	0	3	1
Boiled ,, ,, in barrels	,,	0	2	11
,, ,, ,, in drums.....	,,	0	3	1
Turpentine, in barrels	,,	0	4	4
,, in drums (10 galls)	,,	0	4	6
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)		44	0	0

Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered 62 0 0

		£	s.	d
Red Lead, Dry (packages extra) ..	per ton	31	0	0
Best Linseed Oil Putty	per cwt.	0	13	6
Size. XD quality	fkn.	0	3	0

VARNISHES, &c.

		Per gallon		
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal.....	ditto	0	18	0
Pale Copal.....	ditto	1	0	0
Pale Opal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	0
Fine Copal Flatting.....	ditto	1	0	0
Hard Drying Oak	ditto	0	18	6
Fine Hard Drying Oak	ditto	0	19	6
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	6
Best ditto	ditto	1	2	6
Best Japan Gold Size.....		0	12	0
Best Black Japan		0	10	0
Oak and Mahogany Stain (water).....		0	12	6
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent)		0	15	0
French and Brush Polish		0	12	0
Liquid Dryers in Terebene		0	9	0
Cuirass Black Enamel.....		0	7	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per ft.		Per ft.
15 oz. fourths ... 2½d.	32 oz. fourths	6½d.
15 ,, thirds..... 2½d.	32 ,, thirds	8½d.
21 ,, fourths ... 3½d.	Obscured Sheet, 15 oz. ...	3d.
21 ,, thirds..... 3½d.	,, ,, 21 oz. ...	4½d.
26 ,, fourths ... 4½d.	Fluted, 15 oz. 6½d., 21 oz.	9d.
26 ,, thirds..... 5½d.	Em'lld, 15 oz. 4½d., 21 oz.	5½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
Rolled plate ¼ in.....	4½d.
Rough rolled ⅜ in.	5½d.
Rough rolled ½ in.	5½d.
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted ditto	6½d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per ft. s.	d.
Clearsheet—not exceeding 1 foot.....	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet	3	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1	0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide.....	2	6

THE SCOTTISH BUILDER

NEW BUILDINGS IN SCOTLAND

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *Office not later than Wednesday morning.*

ABERDEEN. — HOUSING. — The T.C. has adopted a scheme for the construction of 30 houses of tenement type without bathrooms, and without the aid of a subsidy from the Government or from the rates. The scheme is estimated to cost £8,000. The houses will be erected at the junction of Park-road and Roslin-street.

EDINBURGH.—BUNGALOWS.—The Dean of Guild Court has passed the following:—Ford and Torrie—16 bungalows at Durham-drive, Portobello, and J. Miller—22 houses at Priestfield-road.

EDINBURGH.—CHURCH.—The Edinburgh Dean of Guild Court has passed plans for a new church and church hall to be built by the Richmond Church of Scotland Trustees at the junction of Wauchope-terrace and Wauchope-road. The church is to have accommodation for a congregation of 550, and provision is being made in the plans for the future erection of a gallery to accommodate 100 more worshippers. The hall is to have accommodation for 250, and two classrooms. The cost of the building will be approximately £10,000, and the architects are Messrs. Reid and Forbes, 17, Great Stuart-street.

EDINBURGH. — SWIMMING POND. — The T.C. has approved of the plans for the open-air bathing pond, etc., on the "island" site between High-street, Rosebank-lane, Promenade, and Bridge-street, Portobello.

GLASGOW. — BUILDING. — The Royal Asylum for the Blind is to build a new building for the blind. The committee has approved the proposal, and suggested that a new asylum should be erected on ground belonging to them at Possilpark, at an estimated cost of £25,000.

GLASGOW.—HOUSING.—The Dean of Guild Court has approved of the plans for a number of small housing schemes presented by the Housing Department of Glasgow Corporation. The schemes are:—Thirty-four three-apartment houses at Barfillan-drive, Craigton; 18 three-apartment and 6 four-apartment at Cartvale-road, Langside; 12 three-apartment and 6 four-apartment at Ardbeg-street, Coplawhill; 16 three-apartment at Pollokshaws-road, and 12 three-apartment at Dalnes-street.

GLASGOW.—HOUSES.—The Town Council Housing Committee has approved of the layout plans for the erection of 354 three-apartment and four-apartment houses in Bilsland-drive.

INVERNESS-SHIRE.—HOUSES.—The C.C. have plans in hand for 12 houses at Ardersier, 14 at Beauby, 18 at Portree, 10 at Badenach, 12 at Dunvegan, 20 at Mallaiz, 14 at Lochaber, and a £3,000 school extension scheme at Dunvegan. Mr. R. Robertson, County Architect, Inverness.

IRVINE.—HOUSING.—Messrs. John Adam and Co., builders, Glasgow, are to erect 100 houses under the 1933 Act at Springbank.

KILMARNOCK.—MATERNITY HOME.—The T.C. has agreed to purchase the old Dairy School, Holmes Farm, from the West of Scotland Agricultural College for the purpose of converting it into a maternity home. It is estimated that alterations and additions will involve an expenditure of about £20,000.

KIRKWALL.—STORE.—The Orkney Harbour Commissioners have approved of a scheme to erect a new store on Kirkwall Pier for the North of Scotland and Orkney and Shetland Steam Navigation Co.

MAYBOLE.—RECONSTRUCTION.—The Ayrshire C.C. have a scheme in hand for the reconstruction of Carrick House into public offices, and possibly police offices. Mr. William Reid, architect, Wellington-square, Ayr.

MOTHERWELL.—BUILDING.—The Burgh Dean of Guild Court has given to the Motherwell Brick Co., Ltd., 29, St. Vincent-place, Glasgow, a warrant to erect in or about Range-road a brick work at an estimated cost of £7,000.

MUSSELBURGH.—HOUSES.—The Dean of Guild Court has sanctioned the erection by the T.C. on ground at Beach-lane of 16 single-person houses. The houses are to be built in a hostel block of two flats. The estimated cost of the block of houses is £2,386.

PEEBLES.—BUILDINGS.—The County Council has agreed to proceed with the provision of new county buildings. The Finance Committee recommended that the Kingsland House scheme be proceeded with. The ground and property belonged to the County Council, and there was no other use to which it could be put. The estimated cost of reconstruction was £20,000.

TAIN.—HOUSING.—The T.C. has approved finally of the lay-out and house plans of the 20 three-apartment houses to be constructed in Manse-road.

WICK.—HOUSING.—The T.C. have decided to build 250 more houses under the 1930 Act.

The Coombe Estate, Kingston Hill.

Arising out of the recent disposal of the Coombe Estate, Surrey, Messrs. Knight, Frank and Rutley have instructions to offer one of the few remaining building sites by auction at an early date. The site, which includes two cottages, extends to about 1½ acres and occupies one of the finest positions on the estate fronting Coombe-lane and adjoining Malden golf course.

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. Painters by ruling of the Scottish National Painters' and Decorators' Joint Council, have from January 1 new rates. Grade A towns, 1/6 per hour; Grade B, 1/4; Aberdeen has a special rate of 1/5½. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classifications ...	A	A¹	A²	A³	B	B¹	B²	B³
Craftsmen	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3	1/2½
Labourers	1/1½	1/1½	1/0½	1/0½	1/0	/11½	/11½	/11

Aberdeen	A	Dundee	A	Hawick	A²	Perth	A
Airdrie	A	Dunfermline	A	Helensburgh	A	Perthshire	A²
Alexandria	A	Dunoon	A	Inverness	B	Peterhead	A²
Arbroath	A²	East Lothian	A	Kilmarnock	A	Renfrewshire	A
Ayrshire	A	Edinburgh	A	Kincardineshire	A²	Rothesay	A
Bathgate	A	Falkirk	A	Kinross-shire	A	Roxburghshire	A²
Bo'ness	A	Forfarshire	A²	Kirkcaldy	A	St. Andrews	A
Broughty Ferry	A	Fort William	B	Lanarkshire	A	Selkirkshire	A²
Clackmannanshire	A	Galashiels	A²	Leith	A	Stirling	A
Coatbridge	A	Glasgow	A	Midlothian	A	Stirlingshire, West	A
Dumbartonshire	A	Greenock	A	Motherwell	A	West Lothian	A
Dumfries	A²	Hamilton	A	Peeblesshire	A²	Wishaw	A
Dumfriesshire	A²						

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 867.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	8	9
Add if in clay	,, ,,	1	0
Add for every additional depth of 6 ft.	,, ,,	0	6
Planking and strutting to trenches	per foot super	0	3
Do. to sides of excavation, including shoring	,, ,,	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundations 1 to 6	per yard cube	24	3
Add if in underpinning in short lengths	,, ,,	5	6
Add if in floors 6 in. thick	,, ,,	2	3
Add if in beams	,, ,,	2	9
Add if aggregate 1 : 2 : 4	,, ,,	9	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	,, ,,	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	27	0	0
Add if in stocks	,,	7	0	0
Add if in Staffordshire blues	,,	22	0	0
Add if in Portland cement and sand	,,	1	5	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	,, ,,	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	,, ,,	0	0	10
Axed in stocks	,, ,,	0	0	9
Rubbed and gauged jointed in putty camber or segmental	,, ,,	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	,, ,,	0	0	11
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	,,	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	,, ,,	9	6
Three-quarter-inch on flats in two thicknesses	,, ,,	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	,, ,,	1	0

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	9
York stone sills fixed	,, ,,	22	0
Bath stone and all labour fixed	,, ,,	10	6
Beer stone and all labour fixed	,, ,,	15	0
Portland stone fixed	,, ,,	15	6
Chilmark stone fixed complete	,, ,,	16	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap. including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	,,	80	9
Do. 24 in. × 12 in. Do. Do.	,,	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	4	0
Do. joists	,, ,,	4	6
Do. roofs, floors and partitions	,, ,,	5	0
Do. trusses	,, ,,	7	3

	¾″	1″	1¼″	2″
Deal rough close boarding per sq.	30/-	35/-	43/-	70/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	,,	50	0
Do. to beams	per ft. sup.	0	9
Centre for arches	,,	1	6
Gutter boards and bearers	,,	1	0

FLOORING.

	¾″	1″	1¼″	1½″
Deal-edges shot per sq.	—	38/-	45/-	52/-
Do. tongued and grooved ,,	—	43/-	50/-	58/-
Do. matchings ,,	40/-	45/-	—	—
Moulded skirtings, including backings and grounds per ft. sup.	1/4	1/7	1/9	2/3

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	,, ,,	2	1
Add for fitting and fixing	,, ,,	0	3
Deal cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights, average size		3	6

DOORS.

	1½″	1¾″	2″
Two-panel square framed per ft. sup.	2/1	2/3	2/5
Four-panel Do. ,,	2/4	2/6	2/9
Two-panel moulded both sides ,,	2/6	2/9	2/11
Four-panel Do. Do. ,,	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	12	6

	1″	1¼″	1½″
Plain deal jamb linings framed per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers ,,	1/2	1/4	1/7
Add if cross-tongued ,,	2d.	2d.	2d.

STAIRCASES.

	1″	1¼″	1½″	2″	2½″
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1½ in.	per ft. run	0	9
Mahogany handrail, average 3 in. x 3 in.	,, ,,	6	0
Add if ramped	,, ,,	12	0
Add if wreathed	,, ,,	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	0
Plain compound girders	,,	18	0
Do. stanchions	,,	20	9
In roofwork	,,	26	6

RAIN-WATER GOODS.

		3″	4″	5″	6″
Half-round plain rebated joints	ft. run	1/-	1/1	1/3	1/6
Ogee Do. Do.	,,	1/2	1/3	1/9	2/3
Rain-water pipes with ears	,,	1/3	1/10	—	—
Extra for shoes and bends	each	2/9	3/11	—	—
Do. stopped ends	,,	1/1	1/4	1/9	2/6
Do. nozzles for inlets	,,	2/2	2/7	3/7	4/-

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	38	0
Do. do. flats	,,	37	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	,, ,,	1	3
Copper nailing	,, ,,	0	3

	½″	¾″	1″	1½″	2″	4″
Drawn lead waste per ft. run	1½	1/4	1/6½	2/5	2/8	—
Do. service... ,,	1/3	1/9	2/-	3/-	—	—
Do. soil ,,	—	—	—	—	—	5/9
Bends in lead pipe each	—	—	—	—	2/6	6/-
Soldered stop ends ,,	0/9	1/1	1/6	2/3	2/10	—
Red lead joints ,,	0/10	0/11	1/2	1/9	2/1	4/3
Wiped soldered joints ,,	2/3	2/9	3/0	3/10	4/10	6/9
Lead traps and cleaning screws ,,	—	—	—	10/6	14/-	—
Bib cocks and joints ,,	6/4	9/7	14/-	—	—	—
Stop cocks and joints ,,	12/4	14/2	20/8	54/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	0
Do. Do. Sirapite	,, ,,	2	3
Do. Do. Keen's	,, ,,	3	0
Add saw lathing	,, ,,	1	4
Add metal lathing	,, ,,	2	4
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	,, ,,	2	2
Do. plain face	,, ,,	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	4	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	6½
26-oz. Do.	,, ,,	0	7¾
Obscured sheet	,, ,,	0	8
¼-in. rolled plate	,, ,,	0	9
¼-in. rough rolled or cast plate	,, ,,	0	10
¼-in. wired cast plate	,, ,,	1	1

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	,, ,,	0	7
Plain painting, 1 coat	,, ,,	0	9
Do. 2 coats	,, ,,	1	2
Do. 3 coats	,, ,,	1	9
Do. 4 coats	,, ,,	2	4
Graining	,, ,,	2	3
Varnishing twice	,, ,,	1	9
Sizing	,, ,,	0	3
Flatting	,, ,,	0	7
Enamel	,, ,,	1	1
Wax polishing	per foot sup.	0	6
French polishing	,, ,,	1	2
Preparing for and hanging paper	per piece 2/- to	4/-	

* **These prices apply to *new buildings only*.** They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Government Departments*.

Ambleside.—24 houses and other works at Church-avenue, for the U.D.C. Messrs. Webb & Gray, architects, Dudley:—

*J. Webb, Ivy House-lane, Coseley £7,903

Angmering-on-Sea.—Garage in Manor-road. Mr. R. W. Willcocks, L.R.I.B.A., architect. Engineers for reinforced concrete work, Trussed Concrete Steel Co., Ltd.:—

*E. H. Wale, Ltd., 35a, High-street, Barnes, S.W.

Ayr.—New halls, offices, etc., for the Ancient Order of Foresters. Mr. James Carrick, architect, 25, Willington-square:—

Excavation, brick and mason—*D. Kirkland.
Steel construction—*Redpath, Brown & Co., Ltd.
Plumber—*A. Dunbar.
Plaster—*J. Leggett & Sons.
Painter—*Johnstone & Kyle.
Joinery, carpentry and ironmongery—*D. Kirkland.
Slater—*Andrew Ballantyne.
Glazier—*J. Thom.
Electrical installation, etc. — *Wilson, Dickson & Co.

(Remainder of Ayr.)

Barnsley.—New church at Kelvin Grove, for the Trustees of the Spiritualistic Community. Mr. H. Everatt, architect, 40, Hemingfield-road, Wombwell:—

*W. Johnson & Sons, Ltd., Wombwell.

Basford.—Alterations to the operating theatre at the Institution, for the Nottinghamshire C.C. Mr. L. Maggs, F.R.I.B.A., County Architect, Shire Hall:—

Builders—
*Sydney Smith, Mansfield £841
Floors—
*W. Brown, Hucknall 112
Heating—
*Midland Plumbing Warming & Ventilating Co., Ltd., Nottingham 318

Benbecula.—Demolition and extension scheme at Creagorry Hotel. Mr. Donald Cameron, architect and surveyor, 183, West George-street, Glasgow:—

Excavation, brick and mason — *Speirs, Ltd., Glasgow.

Birmingham.—New premises in Waterloo-street. Mr. S. N. Cooke, architect:—

*C. Bryant & Son, Ltd., Birmingham.

Boston.—Chapel to seat 250, for the Trustees of Zion Methodist Chapel, in Brothertoft-road. Mr. Hedley A. Mobbs, F.F.A.S., architect and surveyor, 18a, High-street, Boston. Quantities by the architect:—

Geo. Pickup, Firsby, near Spilsby	£4,335 6 9
A. E. Brown & Co., Ltd., Grantham	3,927 0 0
Pearson & Blackwell (Doncaster), Ltd., Doncaster	3,887 3 0
R. M. Phillips & Son, Ltd., Brigg	3,856 0 0
Bernard Pumfrey, Ltd., Gainsborough	3,846 2 2
J. Colam, Boston	3,808 4 6
Metcalf Bros., Doncaster	3,772 4 10
*E. E. Dale & Son, Ltd., Cleethorpes	3,769 2 4
H. Westmorland, Doncaster	3,749 0 0
J. Langley & Son, Ltd., Kirton, near Boston	3,696 10 0

Bradford.—Rebuilding premises in Longsidge-lane, Lidgett Green, for Messrs. Herbert Smith & Co. (Bradford), Ltd., Magneto Works:—

*J. Moulson & Sons, Ltd., Bradford.

Buckhurst Hill.—12 flats. Mr. S. J. Clapp, architect and surveyor, 62, High-road, Woodford Green:—

*John Stark, builder.

Bulford.—Pumping station, meter house, etc., for the Amesbury R.D.C.:—

*G. W. Squires & Sons, Ltd.

Cardenden.—Houses, for the Fife C.C.:—

	Type B.	*Type G.*
Mason and brick work—		
*F. Walker, Kirkcaldy	£262 16 3	£427 12 1½
Carpenter and joiner work—		
*T. Barbour, Cardenden	182 18 2½	286 14 10
Plumber work—		
*W. Norris, Kennoway	69 6 4	129 7 11

Clydebank.—New works and cold storage, for the Co-operative Society. Messrs. Stewart & Paterson, architects, 16, Blytheswood-square, Glasgow:—

Excavation, brick and mason—*D. B. Marquis, Yoker.
Joinery, carpentry and ironmongery—*Scottish Wholesale Co-operative Society, Ltd., Glasgow

Chadderton.—Congregational Church and Sunday school in Garforth-street, Busk, for the Rev. G. Shaw and the Congregational Union. Messrs. Winder & Taylor, A.R.I.B.A., architects, 61, Union-street:—

Excavating and bricklaying—*Carr Bros.
Bricklaying—*Pellowe & Sons.
Plumbing and Painting—*J. Airey.
Plastering—*Isaac Pogson, Shaw.
Slating—*A. Hallwood.

(Remainder of Oldham.)
(Estimated cost £2,400.)

Dagenham. — Adaptation of Goresbrook-road Council school, for the Essex E.C.:—

*A. E. Wright, Ltd., Leyton £1,859

Docking.—Six houses at East Rudham, for the R.D.C. Mr. H. East, F.F.A.S., housing architect, "Fairlight," Poplar-avenue, Heacham, King's Lynn:—

Bailey & Goates, Sudbury, Suffolk	£2,000
Lemmon & Rudd, King's Lynn, Norfolk	1,934
R. M. Lewis, St. Germans, King's Lynn, Norfolk	1,890
R. Claxton & Sons, Wells, Norfolk	1,890
W. Tickner, Sprowston, Norwich	1,787
J. Groom & Son, Hunstanton, Norfolk	1,770
*Fisher & Sons, Fakenham, Norfolk	£1,740

(Subject to Ministry approval.)

Eccles.—Sub-station in Worsley-road, for the T.C. Mr. T. Elce, Borough Engineer:—

*Musker Bros. & Co., Ltd., Swinton.

Edinburgh.—New suite and church halls, etc., at Newington Church. Messrs. J. J. Waddel & Young, architects, 95, Bath-street, Glasgow:—

Excavation, brick and mason—*R. Bruce.
Joinery, carpentry and ironmongery—*Scott, Morton and Tynecastle, Ltd.
Slater—*G. Bee.
Plaster—*R. Kidd.
Plumber—*J. M. Inglis.
Painter—*D. Miller.
Heating engineering—*McKenzie & Moncur.
Electricity installation—*J. Knox.

(All of Edinburgh.)

Epping.—Improvements of the old infirmary at the Epping Institution, for the Essex C.C.:—

*James Whiffen & Son £525

Glasgow.—Alterations at Govan Police Office, for the Corporation. Mr. Thomas Somer, City Engineer:—

*M. Simpson & Co., Ltd., Glasgow £1,095 10

Hanley.—Store premises in Parliament-street, for the British Home Stores, Ltd., 30, Newgate-street, London, E.C.1. Plans by Staff Architect:—

*C. Cornes & Sons, Hanley, Staffs.

Harold Court.—Supplying and erecting a span roof greenhouse, 50 ft. long, at the Sanatorium, for the Essex C.C.:—

*John Sadd & Sons, Ltd., Maldon £128

Harold Court.—Internal and external renovations at the Sanatorium, for the Essex C.C.:—

*A. Saunders, Brentwood £206 12

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Haslemere.—Open-air swimming-pool at Stoatley Hall. Mr. T. Smith Shearer, A.R.I.B.A., architect, 9, Southampton-street, Bloomsbury, W.C. Reinforced concrete engineers, Trussed Concrete Steel Co., Ltd.:—

*F. Milton & Sons, Ltd., Witley.

Hebburn-on-Tyne.—Alterations to the Hebburn Colliery Workmen's Social Club, High-lane Row. Messrs. T. A. Page & Sons, architects, 67, King-street, South Shields:—

*J. M. Black, Hebburn.

Hemel Hempstead.—50 houses in Wood-lane, for the T.C.:—

*E. Mills, Beaconsfield £16,185

(In lieu of tender withdrawn.)

Hemsworth.—Alterations and renovations at the Grammar School, for the Board of Governors:—

*F. P. Longbotham £129 10

Huddersfield.—Additions to Drill Hall in St. Paul's-street, for 5th Battalion The Duke of Wellington's Regiment. Messrs. Stocks, Sykes & Hickson, F.R.I.B.A., architects, 4, St. Peter's-street:—

Mason—*J. Radcliffe & Sons, Ltd.
Concretor—*E. A White.
Joiners—*H. Hollingworth & Son.
Plasterer—*T. B. Tunnacliffe.
Electricians—*J. W. Maddison & Son.
Painters—*W. & P. Holroyd.

(All of Huddersfield.)

Inchinnan.—16 houses at the Inchinnan site. Mr. John Coutts, architect, Hunter-street, Paisley.

Excavation, brick and mason—*J. Woodrow & Sons, Bridge-of-Weir.
Joinery, carpentry and ironmongery—*Houston & Young, Barrhead.
Slater—*A. G. Hutton & Sons, Johnstone.
Plumber—*G. Martin, Paisley.
Plaster—*A. Campbell & Son, Yoker.
Electrical installation, etc.—*James Sweeney, Johnstone.

Kilbarchan.—16 houses and other works. Mr. John Coutts, architect, Hunter-street, Paisley:—

Excavation, brick and mason — *Houston & Young, Barrhead.
Joinery, carpentry and ironmongery—*J. K. Black & Sons, Paisley.
Slater—*A. G. Hunton & Sons, Johnstone.
Plumber—*J. Pattison, Paisley.
Plaster—*A. McKellar, Glasgow.
Painter—*T. Hastie & Son, Glasgow.
Electrical installation, etc.—*J. Sweeney, Johnstone.

Kilmalcolm.—20 houses and other works. Mr. John Coutts, architect, Hunter-street, Paisley:—

Excavation, brick and mason—*Houston & Young, Barrhead.
Joinery, carpentry and ironmongery—*J. Y. Keenie, Ltd., Johnstone.
Slater—*A. G. Hulton & Sons, Johnstone.
Plumber—*J. Webster, Bridge-of-Weir.
Plaster—*T. Thursby, Clydebank.
Painter—*T. Hastie & Sons, Glasgow.
Electrical installation, etc.—*J. H. Brodie & Co., Paisley.

Leicester.—New branch premises at Gallowtree-gate, for Messrs. William Timpson, Ltd., North Park, Kettering:—

*J. Curtis & Son, Ltd., Leeds.

Leicester.—Factory, for "Chilprufe" Manufacturing Co., Ltd., East Park-road. Messrs. C. O. Ogden & Welford, architects, 42, Silver-street:—

*W. & H. Foulds, Ltd., Leicester.

Lichfield.—28 additional houses on the Leafields site, for the T.C.:—

*R. T. Rix & Son, Shenstone Wood End £7,599 15

Liverpool.—Ladies' public conveniences at Moss-lane Bowling Green and Park-lane Bowling Green, for the Bootle T.C. Mr. B. J. Wolfenden, Borough Engineer:—

*W. A. Gale, Ltd., Bootle.

Liverpool.—Laboratories in Mill-lane, for Messrs. Goodlass, Wall & Co., Ltd., Seel-street. Plans prepared by own staff:—

*E. Willis, Liverpool.

London.—Cleaning down of the Fulham-road facade of the existing Town Hall, for the Fulham B.C. Borough Surveyor:—

The Bath & Portland Stone Firms, Ltd.	£630 0
C. W. Courtenay	603 0
The London Stone Cleaning & Restoration Co.	350 0
The Bidder Engr. & Construction Co., Ltd.	309 0
Permanens, Ltd.	285 0
Reparations & Steam Brush Co.	240 0
H. Lowry, Harrogate	238 10
W. J. Marston & Son	230 0
A. Dreyfus, Ltd.	219 0
J. Kinnimont & Son	217 0
Szerelmey, Ltd.	198 10
*Trollope & Colls, Ltd., 5, Coleman-street, E.C.2	157 0

(Remainder of London.)

London.—For a block of offices in Moorgate-street, Telegraph-street and Whalebone-court. Messrs. E. Howard & Partners, architects and surveyors, 3, St. James's-street, S.W.1:—

Geo. Parker & Sons, Ltd.	£74,575
John Mowlem & Co., Ltd.	73,898
Trollope & Colls, Ltd.	72,110
Rice & Son, Ltd.	71,100
F. G. Minter, Ltd.	71,093
J. Jarvis & Sons, Ltd.	70,665
E. A. Roome & Co., Ltd.	70,428
*Harry Neal, Ltd., Northwood	70,316

(Remainder of London.)

¶London.—H.M. Air Ministry has placed the following contracts during the week ending May 5:—

Biggin Hill, Croydon, Hawkings, Kenley and Lympne—artificer's works—Pearce Bros., 46, Widmore-road, Bromley.
Pembroke Dock—clothing existing hangar—F. Robinson & Co. (Contractors), Ltd., 41, Parliament-street, S.W.1.
Cranwell—officers' mess and quarters—F. Hossack & Son, Ruskington, Lincs.

¶London.—Tenders accepted by H.M.O.W. for the week ended May 10:—

Steel cabinets—Money Order Department, Holloway—Roneo, Ltd., 17, Southampton-row, W.C.1; long letter fittings—F. Troy & Co., Ltd., 194/196, Finchley-road, N.W.3.
Mint Telephone Exchange—erection—Higgs & Hill, Ltd., Crown Works, South Lambeth-road, S.W.8.
Cricklewood Branch Post Office—alterations—Soole & Son, Ltd., Dunstable Works, Sheen-road, Richmond.
Steel card index cabinets—Roneo, Ltd., 17, Southampton-row, W.C.1, and Sankey-Sheldon (Harris & Sheldon, Ltd.), 46, Cannon-street, E.C.4.
Natural History Museum—spirit building—erection of extension—A. Roberts & Co., Ltd., 74, Earl's Court-road, Kensington, W.8.
Solid top tables—Mann, Egerton & Co., Ltd., 5, Prince of Wales-road, Norwich; G. M. Hammer & Co., Ltd., Crown Works, Hermitage-road, Harringay, N.4, and F. Troy & Co., Ltd., 194, Finchley-road, N.W.3.
Walton (Liverpool) Employment Exchange—erection—Tysons (Contractors), Ltd., Dryden-street, Liverpool, 5.
Plymouth Telephone Exchange—accelerated low-pressure hot-water heating system and a hot-water supply apparatus—The Brightside Foundry and Engineering Co., Ltd., 14/16, Baldwin-street, Bristol.
Steel vertical filing cabinets—The Art Metal Constructional Co., 199/203, Buckingham Palace-road, S.W.1.
Halifax County Court—alterations and additions—Platt & Featherstone, Ltd., Boothferry-road, Goole.

¶London.—The following works contracts have been placed by the War Office during the week ended May 10:—

Glasgow and Maryhill—term contract—Murdoch & Mackenzie, Ltd., Motherwell.
Aldershot—conversion of stables—E. J. Logan, London, W.C.2.
Dover—periodical painting—G. Lewis & Sons (Dover), Ltd., Dover.
Hounslow—internal painting—Arundel Contractors, Ltd., Bradford.
Hounslow—renewal of stable floors—E. J. Logan, London, W.C.2.
Colchester—road repairs—F. Hutton & Son, Colchester.

London.—Levelling ground and erection of a retaining wall at Dalgarno-gardens recreation ground, for the Kensington B.C.:—

*J. Shelbourne & Co., Ltd., 29, Mark-lane, E.C.3	£317 2 6

Lowestoft.—Five practical instruction rooms at the new school at Notley-road, for the T.C. Borough Surveyor:—

F. R. Hipperson & Son, Norwich	£5,367
W. J. Croft, Ltd., Lowestoft	5,245
D. Leighton & Son, Ltd., Lowestoft	5,179
*J. Balls & Sons, Great Yarmouth	4,927

Lybster.—New school.

Mason—	
*M'Kain & Sutherland, Wick	£4,975 6 0
Carpenter—	
*D. M. Geddes, Watten	3,337 10 9
Slater—	
*William Taylor & Son, Inverness	652 8 9
Plumber—	
*Alex. Sutherland, Colspie	893 19 0
Plaster and concrete—	
*Wm. Mackay, Wick	570 19 6
Electric light—	
*John o' Groats Lighting Co.	225 0 0
Heating installation—	
*Combe & Co., Glasgow	692 0 0
Ground layout—	
*J. Gunn, Cairnroich	420 17 0
Paint work—	
*R. Rolland, Perth	424 18 10

Maidenhead.—Masonic dining-hall, with alterations and additions to the existing hall. Mr. R. Gilroy, architect, Maidenhead:—

*Jones & Sons, Upper Alwyn-road, Maidenhead.

Manchester.—36 houses in Milton-street, for the T.C.:—

Excavation and brick works—	
*M. MacKenzie	£4,565 11 0
Joiner and glazier works—	
*W. Chambers & Sons, Ltd.	3,285 1 6
Plumber works—	
*Thos. Coats	1,574 13 8
Slater and roughcaster—	
*J. & J. Thomson	1,055 12 5

Manchester.—Warehouse on Back China-lane and Hilton-street, for Messrs. J. D. Williams & Co., Ltd., 36, Hilton-street. Messrs. Pendleton & Dickinson, LL.R.I.B.A., architects, 16, Brazennose-street:—

Builder—*J. Gerrard & Sons, Ltd.
Steelwork—*Edward Wood & Co., Ltd.
Asphalting—*Val de Travers Asphalte Co., Ltd.
Plastering—*J. Cadman & Sons, Ltd.
Painting—*W. J. Roberts.
(All of Manchester.)

Market Drayton.—Alterations at the Victoria Mill House and repairs to Mill, for the U.D.C.:—

*F. A. Hood, Market Drayton	£249

Market Drayton.—28 houses, including roads, sewers, drains, paths and fencing, on the Grotto-road estate, for the U.D.C. Mr. W. L. Lind, architect, Trinity-buildings, Hanley, Stoke-on-Trent:—

*T. Healey, Market Drayton	£8,336
Roads and sewers	437

Nenagh.—111 houses on a site at Nenagh North, for the U.D.C. Mr. W. J. Chadwick, Borough Engineer:—

Roofing with concrete tiles—		
Roche, Morrissey & Kennedy, Clonmel	(a)	£28,686 17 9
Roofing with Killaloe slates—		
*Roche, Morrissey & Kennedy, Clonmel, Co. Tipperary	(b)	29,778 7 9
Tiles and roofing—		
S. Phillips, Drumcondra, Dublin	(a)	29,363 0 0
Slates roofing—		
S. Phillips, Drumcondra, Dublin	(b)	30,463 0 0
Tiles—		
C. O'Neill, Kilishen, Co. Clare	(a)	29,363 0 0
Slates—		
C. O'Neill, Kilkshen, Co. Clare	(b)	30,362 0 0

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Newcastle-on-Tyne.—Alterations to Messrs. Carricks (Caterers), Ltd., Grey-street. Messrs. Marshall & Tweedy, architects, 129, Pilgrim-street:—

*S. Miller, Ltd., Newcastle.

Newcastle-on-Tyne.—Construction of jetty 64 ft. long into Tyne, for Messrs. James Deuchar, Ltd. Mr. E. M. Lawson, architect, 19, Ridley-place, Newcastle:—

*Brims & Co., Newcastle.

Newcastle-on-Tyne.—New school in connection with St. Michael's R.C. Church. Messrs. Stienlet & Maxwell, architects, Saville-chambers:—

*E. Mackin, Felling-on-Tyne.
(Estimated cost £9,000.)

Northampton.—Extensions to the warehouse, for Messrs. Phipps & Son, Ltd., Guildhall-road. Messrs. Brown & Henson, F./L.R.I.B.A., architects, 83, St. Giles-street. Reinforced concrete engineers, Trussed Concrete Steel Co., Ltd.:—

*Underwood & Weston, Lady's-lane, Northampton.

Nottingham.—Alterations, etc., to the "New Inn," Bradford-road, for Messrs. Ind, Coope & Co., Ltd., brewers, Station-street, Burton-on-Trent. Mr. T. Jenkins, F.R.I.B.A., architect, Arcade-buildings, Station-street:—

*G. A. Pillatt & Son, Nottingham.

Pitsea.—Combined Treatment Centre, for the Essex C.C.:—

*Hosking & Son, Leigh-on-Sea	£2,020

Portsay.—36 houses near Port-crescent, for the T.C.:—

Mason—*A. Milne & Son, Buckie.
Joiner—*Wm. M'Donald, Portsay.
Slater—*V. Michael, Elgin.
Plasterer—*G. Packman, Buckie.
Plumber—*V. Cockrane, Portsay.
Painter—*V. Masson, Portsay.

Ramsgate.—Repairs and alterations to bowls pavilion, also additional lavatory accommodation at Warre Recreation Ground, for the T.C. Mr. Adlington, Borough Engineer and Surveyor:—

J. B. Sharman, Ltd.	£58 15 0
J. B. Sharman	56 0 0
Grummant Bros.	53 0 0
S. G. Stannard	51 7 6
*F. Rogers, 161, Grange-road	49 15 0

(All of Ramsgate.)

Reigate.—Detached dwelling house in Rushworth-road, for the Highways Superintendent, for the T.C.:—

G. W. Welfare, Reigate	£850 0 0
Bartley & Ward, Ltd., Crawley	843 0 0
H. Doddrell, Croydon	838 0 0
G. F. Mackriell, Redhill	810 0 0
J. A. Tobutt, Reigate	793 10 0
Pink & Oram, Merstham	790 0 0
G. Martin, Redhill	775 0 0
Atkinson & Potter Bros., Reigate	767 0 0
J. & R. Tingley, Kingswood	725 0 0
*Henry Apps, Redhill	684 10 6

Rugby.—Petty sessional court and police station and also heating installations, for the Warwickshire C.C. Mr. A. C. Bunch, F.R.I.B.A., County Architect, Shire Hall, Warwick:—

Builders—
*W. W. Webster, Builsborough | £4,794

Heating—
*Ashwell & Nesbitt, Ltd., Birmingham | 495

Saffron Walden.—Structural improvements at the Institution, for the Essex C.C.:—

*Rooke & Sons, Saffron Walden	£549

Severalls.—Heightening of the chimney shaft at the boiler house at Severalls Mental Hospital, for the Essex C.C.:—

*Reading Boiler Setting Co., Ltd.	£387

Shawbury.—Casuals wards at Shawbury, for the Salop C.C. Mr. A. G. Chant, A.R.I.B.A., County Architect, 5, Belmont, Shrewsbury:—

Builders—
*T Healey, Market Drayton | £11,599

Heating—
*T. S. Elder, Oswestry | 457

Shephed.—50 houses on the Glenmore estate, for the U.D.C.:—

*R. Austwayte, Sherwood	£13,824

Stretford.—Supply and fixing of approximately 600 yards of 2-ft. high ornamental wrought-iron railings and gates in the Quadrant, Great Stone-road, for the T.C.:—

*Wm. Gratrix & Sons	£314 10

Stretford.—Replacing existing chestnut fencing and making good defective lengths of existing iron railings in Main-drive, Longford-park, and railings of new children's playground in Longford-park, for the T.C.:—

*Wm. Gratrix & Sons—
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Sunderland.—Garage in Back Hylton-road, for Messrs. Fenwick & Sons:—

*Golding & Morgan, Sunderland.

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Wallsend.—R. C. Watson, motor engineers, Wallsend, proceeding with garage, workshops and shops and offices in Coast-road. Mr. T. K. White, architect, 33, Groat Market, Newcastle:—

*J. M. Hood & Son, Coast-road, Wallsend.

Warrington.—Alterations and additions to offices at the Electricity Station at Howley, for the C.B. Mr. Andrew M. Ker, Borough Engineer:—

*W. & A. Ashton, Warrington ... £3,680 6 6

Warsop.—Central Hall at Netherfield-lane school, for the Nottinghamshire C.C. Mr. L. Maggs, F.R.I.B.A., architect, County Hall, Nottingham:—

*Greenwoods (Mansfield), Ltd., Mansfield £1,683

Warwick.—Laundry at the Institution, for the Warwickshire C.C. Mr. A. C. Bunch, F.R.I.B.A., architect, Shire Hall, Warwick:—

*J. I. Fitter, Birmingham £3,698

West Bromwich.—Extensions to stand and improvements to ground, for directors of the West Bromwich Albion Football Club. Messrs. Wood, Kendrick & Reynolds, F.R.I.B.A., architects, 57, Colmore-row, Birmingham:—

*W. Jackson (Langley Green), Ltd., Birmingham.

West Hartlepool.—Extending the nurses' home at the Poor Law Institution:—

*Harland & Parker, Ltd., York-rd., West Hartlepool.

Wolverhampton.—214 houses of various types on the Low Hill estate, for the T.C.:—

*J. F. Hughes & Son, Wolverhampton £58,060

Woodhouse Mansfield.—Extensions at the Oxclose-lane Municipal school, for the Nottinghamshire E.C. Mr. L. Maggs, F.R.I.B.A., county architect, Shire Hall, Nottingham:—

*G. T. Hill, Nottingham £4,762

Contractors' Estates.

The late Mr. William T. Mulliner, of Wandsworth, left £36,772 (net personalty £17,273).

Mr. Frederick Parsons, of Dyke-road, Brighton, Sussex, builder, left £122,027.

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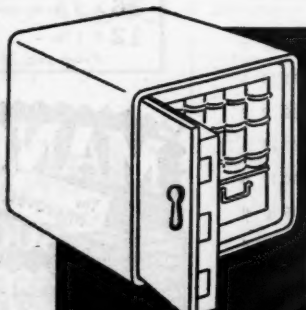
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